# BIOLOGIA

# CENTRALI-AMERICANA.

---

## ARACHNIDA-ARANEIDEA.

VOL. I.

BY

THE REV. OCTAVIUS PICKARD-CAMBRIDGE, M.A., F.R.S., &c.

1889-1902.

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# INTRODUCTION.

In dealing with the Central-American Araneidea, the subject was divided (see footnote to page 1) into two parts: I. to include descriptions and figures of those species considered to be new to science, taken according to my own convenience and other circumstances; and II. a Systematic List of all the species known to occur within the region, with their geographical distribution. So far as this arrangement has been carried out, the present volume contains the species worked out by myself, according to the two appended Lists: (i.) a Systematic List of the new Species described and figured, numbering 417; and (ii.) a List of those Species identified by myself as already known, numbering 139. The volume contains 309 pages of letterpress and thirty-nine coloured plates, the drawings for which have been prepared by Mr. A. T. Hollick, and transferred to stone by Mr. E. Wilson.

OCTAVIUS PICKARD-CAMBRIDGE.

*August*, 1902.

# SYSTEMATIC* LIST OF SPIDERS

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* Figured under the name of *T. hirsutum* on Plate XXXIV. fig. 6.

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* ? = *T. walckenaërii.*

† Figured under the name of *Singa lutea.*

‡ Sub *E. destricta*, ♀, on Plate.

§ Wrongly marked ♀ on the Plate.

‖ Fig. 14 is *E. consequa*, ♀.

¶ The ♂ described under this name, fig. 7, = *Scoloderus gibber*, which see.

** Figured under the name of *Cyrtarachne mexicana.*

| | Page. | Plate. | Fig. |
|---|---|---|---|
| Fam. ULOBORIDÆ. | | | |
| Subfam. ULOBORINÆ. | | | |
| Uloborus signatus, ♂ ♀ | 264 | XXXVIII. | 9, 10 |
| —— cinereus, ♀ | 265 | XXXIII. | 13 |
| —— spernax, ♀ | 265 | XXXIII. | 12 |
| —— variegatus, ♀ | 266 | XXXVIII. | 11 |
| —— vicinus, ♀ | 266 | XXXVIII. | 12 |
| Ariston albicans, ♀ | 216 | XXVII. | 9 |
| Subfam. MIAGRAMMOPINÆ. | | | |
| Miagrammopes mexicanus, ♀ | 116 | XV. | 7 |
| —— lineatus, ♀ | 137 | XVII | 12 |
| Fam. STEPHANOPIDÆ. | | | |
| Erissus pustulatus, ♀ | 271 | XXXV. | 2 |
| Stephanopoides cognata, ♀ | 104 | XIV. | 2 |
| Epicadinus (Eripus) trifidus, ♀ | 121 | XV. | 12 |
| Fam. THOMISIDÆ. | | | |
| Subfam. THOMISINÆ. | | | |
| Thomisus odiosus, ♂ | 271 | XXXIV. | 5 |
| Misumena (Runcinia) vigilans, ♂ ♀ | 72 | IX. | 4, 5 |
| —— (——) tibialis, ♂ | 73 | X. | 3 |
| —— (——) blanda, ♂ | 74 | X. | 1, 2 |
| —— (——) rugosa, ♀ | 75 | IX. | 16 |
| —— (——) depressa, ♂ ♀ | 75 | X. | 4, 5 |
| —— (——) signata, ♀ | 76 | IX. | 6 |
| —— (——) sagittata, ♀ | 77 | X. | 7 |
| —— (——) propinqua, ♀ | 77 | X. | 6 |
| —— (——) lutea, ♀ | 78 | IX. | 13 |
| —— (——) annulipes, ♂ | 78 | IX. | 14 |
| —— particeps, ♀ | 103 | XIV. | 1 |
| —— ornata, ♀ | 119 | XV. | 11, 13 |
| —— pascalis, ♀ | 85 | XI. | 6 |
| —— pallida, ♀ | 86 | XI. | 10 |
| —— conjuncta, ♀ | 86 | XI. | 7 |
| Synæma bimaculata, ♀ ♂ | 71 | IX. | 7, 8 |
| —— cirripes, ♂ | 79 | X. | 11 |
| —— ——, ♀ | 180 | XXII. | 2 |
| —— puta, ♀ | 80 | X. | 9 |
| —— palliata, ♀ | 81 | X. | 8 |
| —— maculosa, ♂ | 81 | X.<br>XI. | 10<br>2 |
| —— affinitata, ♂ ♀ | 82 | X. | 12, 13 |
| —— socia, ♂ | 83 | XI. | 4 |
| —— profuga, ♀ | 84 | XI. | 3 |
| —— adjuncta, ♀ | 84 | XI. | 1 |
| —— culta, ♀ | 119 | XV. | 15 |
| —— interrupta, ♂ ♀ | 120 | XV. | 9, 10 |
| —— madida, ♂ | 153 | XIX. | 7 |
| —— prosper, ♂ | 213 | XXVI. | 13 |
| Synæma polita, ♂ ♀ | 241 | XXXIII. | 14, 15 |
| Diæa puta, ♀ | 85 | XI. | 5 |
| —— spinigera, ♂ | 241 | XXXIII. | 16 |
| Bassania æmula, ♀ | 249 | XXXI. | 5 |
| Xysticus adustus, ♀ | 70 | IX. | 11 |
| —— advectus, ♀ | 71 | IX. | 12 |
| —— pellax, ♂ | 138 | XVII. | 14 |
| —— facetus, ♂ | 179 | XXII. | 1 |
| Strophius hirsutus, ♀ | 87 | XI. | 9 |
| —— signatus, ♂ | 103 | XIV. | 3 |
| Tmarus ineptus, ♀ | 94 | XIII. | 3 |
| —— mundulus, ♀ | 95 | XII. | 11 |
| —— corruptus, ♀ | 95 | XII. | 10 |
| —— intentus, ♂ ♀ | 96 | XIII. | 1, 2 |
| —— pauper, ♂ | 96 | XII. | 8 |
| —— studiosus, ♀ ♂ | 97 | XII. | 6, 7 |
| —— decens, ♀ | 98 | XII. | 9 |
| —— mendax, ♀ | 139 | XVIII. | 9 |
| —— jocosus, ♂ ♀ | 288 | XXXII. | 11, 12 |
| Subfam. APHANTOCHILINÆ. | | | |
| Majella affinis, ♀ | 191 | XXIV. | 3 |
| Bucranium spinigerum, ♀ | 87 | XI. | 11 |
| Subfam. PHILODROMINÆ. | | | |
| Thanatus punctiger, ♀ | 88 | XI. | 12 |
| —— longipes, ♂ | 168 | XXI. | 12 |
| Philodromus maculatipes, ♂ | 118 | XV. | 14 |
| —— albicans, ♀ | 227 | XXIX. | 9 |
| —— decolor, ♀ | 291 | XXXII. | 3 |
| Tibellus affinis, ♀ | 252 | XXXI. | 11 |
| Apollophanes (Tibellus) punctipes, ♀ | 79, 252 | IX. | 15 |
| —— distinctus, ♀ | 290 | XXXII. | 2 |
| Subfam. SPARASSINÆ. | | | |
| Sparassus minax, ♀ ♂ | 177 | XXII. | 3, 4 |
| Sadala simonii, ♀ | 65 | VIII. | 17 |
| —— fugiens, ♂ | 66 | IX. | 10 |
| Vindullus similis, ♀ | 67 | IX. | 9 |
| Olios erroneus, ♀ | 67 | IX. | 1 |
| —— manifestus, ♂ ♀ | 68 | VIII. | 16, 18 |
| —— sagus, ♀ | 69 | IX. | 3 |
| —— exasperans, ♀ | 69 | IX. | 2 |
| Prusias nugalis, ♂ | 102 | XIII. | 9 |
| —— ——, ♀ | 247 | XXXI. | 1 |
| Ramnes semotus, ♀ | 102 | XIII. | 8 |
| Fam. TRECHALIDÆ. | | | |
| Perissoblemma approximatum, ♀ | 105 | XIV. | 4 |
| Trechalea (Triclaria) habilis, ♂ | 173, 233 | XXII. | 9 |
| —— (——) extensa, ♂ | 174 | XXII. | 10 |
| —— (——) connexa, ♂ | 233 | XXX. | 1 |
| Enna velox, ♂ ♀ | 232 | XXX. | 2, 3 |

| | Page. | Plate. | Fig. |
|---|---|---|---|
| **Fam. CTENIDÆ.** | | | |
| Ctenus (?) mordicus, ♀ ♂ ..... | 100 | XIII. | 6, 7 |
| **Fam. SENOCULIDÆ.** | | | |
| Senoculus (Labdacus) prolatus, ♂ .... | 218 | XXVIII. | 3 |
| **Fam. LYCOSIDÆ.** | | | |
| Trochosa insignis, ♂ ..... | 272 | XXXVIII. | 7 |
| Pirata felix, ♀ ..... | 243 | XXXIII. | 6 |
| **Fam. OXYOPIDÆ.** | | | |
| Oxyopeidon facile, ♀ ..... | 140 | XVI. | 6 |
| —— putum, ♂ ♀ ..... | 140 | XVI. | 7, 8 |
| —— subfacile, ♀ ..... | 141 | XVI. | 5 |
| —— molestum, ♀ ..... | 141 | XVI. | 15 |
| —— flebile, ♂ ♀ ..... | 141 | XVI. | 9 |
| —— lætum, ♀ ..... | 142 | XVI. | 10 |
| —— difficile, ♀ ..... | 142 | XVI. | 13 |
| **Fam. SALTICIDÆ.** | | | |
| Simonella decipiens, ♂ ♀ ..... | 163 | XIX. | 15, 16 |
| Rhane munda, ♀ ..... | 162 | XIX. | 17 |
| Coccorchestes scarabæoides, ♂ ♀ .... | 121 | XV. | 8 |
| —— adjacens, ♂ ..... | 162 | XX. | 4 |

# LIST OF SPECIES IDENTIFIED*.

Fam. THERAPHOSIDÆ.

Sphærobothria hoffmannii, *Karsch.*

Fam. FILISTATIDÆ.

Filistata hibernalis, *Hentz.*

Fam. SCYTODIDÆ.

Loxoscelis rufipes, *Luc.*

Fam. DRASSIDÆ.

Echemus lubricus, *Sim.*
Lauricius hemicloeinus, *Sim.*
Trachelas ruber, *Keys.*

Fam. DICTYNIDÆ.

Zorocrates fuscus, *Sim.*

Fam. PHOLCIDÆ.

Artema convexa, *Bl.*

Fam. THERIDIIDÆ.

Theridion fordum, *Hentz.*
„ tepidariorum, *C. L. Koch.*
„ eximium, *Keys.*
„ studiosum, *Hentz.*
„ tæniatum, *Keys.*
„ evexum, *Keys.*
„ magnificum, *Keys.*
„ bimaculatum, *Keys.*
„ perniciosum, *Keys.*
Thwaitesia (Achæa) compressa, *Keys.*
Teutana nitida, *Holmb.*
„ zonata, *Keys.*
Euryopis floricola, *Keys.*
„ taczanowskii, *Keys.*
Trithena tricuspidata, *Bl.*
Lithyphantes nigro-femoratus, *Keys.*
Latrodectus mactans, *Fabr.*
„ verecundus, *Hentz.*
„ lineatus, *Hentz.*
Frontina calcarifera, *Keys.*
„ hospita, *Keys.*
Wendilgarda mexicana, *Keys.*
Erigone montevidensis, *Keys.*
Theridiosoma argentatum, *Keys.*
„ concolor, *Keys.*
Chrysso albomaculata, *Cambr.*
Theridula triangularis, *Keys.*
„ multiguttata, *Keys.*
„ quinquepunctata, *Keys.*
Spintharus elongatus, *Keys.*
„ flavidus, *Keys.*
Argyrodes obscurus, *Keys.*
Mimetus brasilianus, *Keys.*

Fam. EPEIRIDÆ.

Meta rubromaculata, *Keys.*
Argyroepeira pulcherrima, *Keys.*
„ hortorum, *Hentz.*
„ argyra, *Walck.*

* Unless otherwise stated, these are all represented in the collections obtained by the Editors from Mexico or Central America.

Argyroepeira preciosissima, *Walck.*
„ volupis, *Keys.*
„ striata, *Keys.*
Tetragnatha bogotensis, *Keys.*
„ straminea, *Emert.*
Nephila plumipes, *C. L. Koch.*
„ flagellans, *L. Koch.*
Argiope aurelia, *Sav.*
„ argentata, *Fabr.*
„ argyraspis, *Walck.*
„ fasciata, *Hentz.*
Cyclosa bifurca, *M'Cook.*
Zilla melanocephala, *Tacz.*
Epeira crassicauda, *Keys.*
„ labyrinthea, *Hentz.*
„ benjamina, *Walck.*
„ (Eustala) fuscovittata, *Keys.*
„ grammica, *Bl.*
„ veniliæ, *Keys.*
„ tuberculata, *Keys.*
„ pallidula, *Keys.*
„ parvula, *Keys.*
„ guttata, *Keys.*
„ mexicana, *Luc.*
„ bifurcata, *Walck.*
„ nicaraguensis, *Keys.*
„ arenata, *Walck.*
„ ravilla, *C. L. Koch.*
„ theisii, *Walck.* (=oaxacensis, *Keys.*?).
„ mormon, *Keys.*
„ globosa, *Keys.*
„ scutulata, *Hentz.*
„ edax, *Bl.*
„ trivittata, *Keys.*
„ maculata, *Keys.*
„ caudata, *Hentz.*
„ caroli, *Hentz.*
„ vegeta, *Keys.*
„ cambridgii, *Keys.*
„ vulgaris, *Hentz.*
„ viriosa, *Keys.*
„ stellata, *Hentz.*
Mahadiva (Epeira) verrucosa, *Hentz.*
„ „ meridionalis, *Hentz.*

Fam. GASTERACANTHIDÆ.

Gasteracantha hexacantha, *C. L. Koch.*
Gasteracantha cancriformis, *C. L. Koch* (in Coll. *O. P.-C.*).
„ rubiginosa, *C. L. Koch* (in Coll. *O. P.-C.*).
Acrosoma sagittatum *M'Cook.*
„ reduvianum, *Walck.*
„ gracile, *Walck.* (=rugosum, *Hentz*).
„ gladiola, *Walck.*
„ lucasii, *Keys.*
„ swainsonii, *L. Koch.*
„ petersii, *Luc.*
„ mitratum, *Hentz.*
„ matronale, *C. L. Koch.*

Fam. ULOBORIDÆ.

Uloborus collinus, *Keys.*

Fam. STEPHANOPIDÆ.

Stephanopis pentagona, *Keys.*
„ rugosa, *Keys.*

Fam. THOMISIDÆ.

Selenops mexicanus, *Keys.*
„ spixii, *Keys.* (non *Perty*).
„ nigromaculatus, *Keys.* (in Coll. *O. P.-C.*).
Sadala (Sparassus) obscura, *Keys.*
Misumena bivittata, *Keys.*
„ pallens, *Keys.*
„ rosea, *Keys.*
„ mexicana, *Keys.*
Heteropoda venatoria, *Linn.*

Fam. TRECHALIDÆ.

Trechalea (Triclaria) longitarsis, *C. L. Koch* (in Coll. *O. P.-C.*).

Fam. CTENIDÆ.

Cupiennius salei, *Sim.*

Fam. SENOCULIDÆ.

Senoculus (Labdacus) purpureus, *Sim.*

Fam. LYCOSIDÆ.

Sosippus mexicanus, *Sim.*

Fam. SALTICIDÆ.

Simonella americana, *Peckh.*

Lyssomanes gemineus, *Peckh.*
Salticus centralis, *Peckh.*
Plexippus puerperus, *Hentz.*
,, mimicus, *C. L. Koch.*
Bavia ornata, *Peckh.*
Jotus lividus, *Peckh.*
,, opimus, *Peckh.*
Pensacola signata, *Peckh.*
Cytea concinna, *Peckh.*
Martella petasii, *Peckh.* (in Coll. *O. P.-C.*).
Rudea geniculata, *Peckh.*
Amycus longipalpis, *Peckh.*
,, benignus, *Peckh.*
Erica eugenia, *Peckh.*
Pardessus gratiosus (*C. L. Koch*).
Ashtabula zonaria, *Peckh.*
Cyrba tæniola, *Hentz.*
Phidippus howardii, *Peckh.* (in Coll. *O. P.-C.*).
Escantsia parvula, *Peckh.* (in Coll. *O. P.-C.*).
Cyrene delecta, *Peckh.* (in Coll. *O. P.-C.*).
Euophrys albipalpis, *Tacz.*

# ERRATA ET CORRIGENDA.

| Page | Line | |
|---|---|---|
| 50 | 24 | for *E.* read *C.* |
| 165 | 10 | *for* toothless *read* tooth-like. |
| 221 | | between lines 19 and 20 insert: *Hab.* MEXICO, Amula (*H. H. Smith*). |
| 230 | 6 | *erase the words* "and figure." |
| 286 | 27 | for *florans* read *plorans.* |
| 297 | 14 | for *male* read *female.* |

# Class ARACHNIDA.

## Order ARANEIDEA.

### DESCRIPTIONS OF NEW SPECIES*.

### META, Keyserling.

**Meta brevipes,** sp. n.

*Adult female*, length 2 lines.

The *cephalothorax*, *legs*, and *falces* are brownish-yellow; the legs short, 1, 2, 4, 3, moderately strong, once apparently furnished with a few slender spines, which have, however, been mostly rubbed off.

*Eyes* on black spots. The interval between those of the hind central pair less than that between each and the hind lateral eye next to it. The four centrals form a square whose anterior side is slightly shorter than the posterior. Height of clypeus less than the diameter of one of the fore central eyes.

*Falces* rather long, strong, and a little prominent at their base in front.

*Maxillæ* not more than half the length of the labium, very slightly divergent, and rounded on the outer side at their extremity. They are yellow-brown; the *labium* and *sternum* darker.

*Abdomen* large, short, very much elevated, almost globular above, of a subtriangular form, broad at the fore part across the shoulders, and projecting greatly over the thorax. The ground-colour is a rather golden yellow-brown, and it is closely spotted with small silvery and silvery-gilt spots, leaving a central longitudinal line on the upperside, emitting two or three oblique lines on each side; a somewhat curvilinear triangular area on the upperside is of rather darker yellow-brown than the rest, and has on each of its two curved sides several marginal blackish spots; the apex of this triangle is just above the spinners, and its base, which is defined by the anterior oblique lines, is in front, across the shoulders. On the underside is an oblong dark yellow-brown space defined by a silvery-gilt line just between the spinners and the genital aperture, which is darkish yellow-brown and inconspicuous, though of characteristic form.

*Hab.* GUATEMALA, Chilasco (*Sarg*). A single specimen.

This Spider is very Epeiriform, especially in the shape of the abdomen, which on the upperside reminds one strongly of the common British and European *Epeira agalena*, Walck.

* [In treating of the "Araneidea" we propose to pursue a somewhat different course of arrangement from that adopted in other portions of this work, where a systematic sequence has been followed in most cases. We divide this subject, with the author's approval, into two parts: the first to contain descriptions of the many new species contained in our collections and also the Plates accompanying them; the second to include a systematic arrangement of all the species known to occur within the region under investigation, together with what is known of their geographical distribution. As a full explanation of the figures is issued on a separate page accompanying each Plate, it is not repeated in this portion of the work.—EDD.]

## **Meta globosa,** sp. n.

*Adult female*, length scarcely $1\frac{1}{4}$ line.

The colour of the cephalothorax, falces, legs, palpi, maxillæ, labium, and sternum is a dull pale yellow, the legs tinged with greenish, and the maxillæ, labrum, and sternum with brown.

The *eyes* are closely grouped together on black spots, and form an area not differing much in the length of its longitudinal and transverse diameter—the latter, if anything, being a little the longest; those of the anterior row are very near together, the height of the clypeus being less than the diameter of a fore central eye.

The *legs* are long, very slender, 1, 2, 4, 3, furnished with hairs and a few very fine spines.

The *falces* are of moderate length and strength, and prominent at their base in front.

The *maxillæ* are less in length than in *Argyroepeira*, nearly or quite straight (not divergent, or very slightly so) and scarcely widened at their extremities. The labium appears to exceed, slightly, half the length of the maxillæ, and the sternum is of a more heart-shape, *i. e.* the sides are more curved and its form therefore less rigidly triangular.

The *abdomen* is rather large, nearly globular, but when looked at sideways the hinder part is more elevated and convex than the fore part, and falls vertically to the spinners; it is of a dull yellowish drab-brown colour, the sides and upperside covered more or less thickly with silvery spots and small blotches—in some examples those on the upperside roughly form some oblique stripes diverging backwards from the median line, along which is a tapering stripe free from spots. On each side of the posterior declivity is a large conspicuous round silvery blotch, and a strong curved silvery bar across the middle of the underside, the convexity of the curve directed forwards; behind this curved bar the surface is tinged with brown. The genital aperture is small and inconspicuous, but characteristic in its form.

*Hab.* GUATEMALA, Panzos, Senahu (*Sarg*).

This pretty and delicate little Spider decidedly approaches, if it be not identical with, the typical *Meta*, though its colours and markings bring it very close to *Argyroepeira*, and especially to *A. curta*, from which, however, the globular form of the abdomen will at once distinguish it. In this character it comes near to *Theridion*, and, particularly, to some species of *Argyrodes*.

## **Meta alboguttata,** sp. n.

*Adult female*, length slightly over 2 lines; *male*, $1\frac{1}{2}$ line.

The *cephalothorax* of the female is of a dull yellowish colour marked with dark yellow-brown longitudinal stripes on the caput, which converge into a blunt point backwards about the thoracic junction. The occipital region is a little gibbose.

The *eyes* are tolerably closely grouped together, and on black spots; the interval between those of the hind-central pair is a little less than that between each and the hind lateral next to it. The four central eyes describe a rectangular figure whose longitudinal is greater than its transverse diameter. The height of the clypeus is equal to the diameter of one of the fore central eyes.

The *legs* are moderate in length and strength, 1, 2, 4, 3; they are similar to the cephalothorax in colour, and marked in front of the femora of the first and second pairs with more or less obscure, broken, longitudinal brownish lines: this character, however, is probably not constant. The anterior extremities of the tibiæ and metatarsi of the first two pairs are reddish-brown; they are furnished with hairs and a few fine spines.

The *falces* are strong, rather long, prominent at their base in front, similar in colour to the cephalothorax, and marked with a transverse brownish spot in front, not far from the cephalothorax.

The *maxillæ*, *labium*, and *sternum* are rather suffused with yellowish-brown, less so in some examples than in others. The maxillæ are like those of *M. curta* and *M. globosa*, though, if anything, slightly longer.

The *abdomen* is short, stout, somewhat globular above and in front, and pointed at the spinners; its ground-colour is dull drab, thickly speckled with small silvery spots on the sides and above—in some examples disposed somewhat in curved, transverse, and oblique lines; in some specimens there are traces of broken

brownish lines and markings. The underside has a few silvery spots disposed transversely on each side, a little way in front of the genital aperture, which is simple but a little prominent, characteristic in form and of a red-brown colour.

The *male* has the occiput more fulvous than the female, and the three groups of eyes more separated from each other. The cephalothorax is tinged with yellow-brown, and the falces and sternum strongly so.

The *palpi* are short, pale yellowish; the radial joint is somewhat clavate, and longer than the cubital, and furnished in front with several longish curved tapering hairs, the cubital having a single one, and the legs a strong straight one. The digital joint is of moderate size at its posterior extremity; it ends with a curved, red-brown, sharp, horn-like apophysis, whose point is directed outwards. The palpal organs are well developed, not very complex, but with a distinct black tapering spine coiled round their anterior extremity, and a strongish, curved, obtusely-ended process on the outer side of the hinder extremity close to the point of the digital horn.

The *abdomen* is less globose in form, and more thickly mottled with silvery spots above, where also the brown lines are more distinct, forming a tolerably regular pattern of a series; transverse parallel or looped transverse lines on each side of the median line.

The *falces* are also longer than in the female.

*Hab.* GUATEMALA, San Marcos, Tamahu, Panzos, and Sakiyac (*Sarg*); PANAMA, Bugaba (*Champion*).

### **Meta decolorata,** sp. n.

*Adult female*, length 3 lines.

The whole of the fore part is pale yellow, the anterior extremities of the tibiæ, metatarsi, and tarsi of the legs strongly suffused with red-brown.

*Legs* moderate in length and strength, 1, 2, 4, 3; spines few and slender.

*Maxillæ* rather long, double the length of the labium, straight, not greatly enlarged at the extremities, where they are rather rounded on the outer side. Labrum and maxillæ suffused with brownish.

*Eyes* in the ordinary position of the genus. Height of clypeus equal to diameter of an eye of the fore central pair. The four central eyes, which are nearly equal in size, form a rectangular figure whose longitudinal diameter is distinctly longer than its transverse diameter; and the interval between the eyes of the hind central pair is distinctly less than that between each and the hind lateral eye next to it.

The *abdomen* is rather large, subglobular. The ground-colour is pale dull drab, pretty closely but not densely covered above and on the sides with mostly roundish silvery spots; no pattern is traceable, but near the lower part of the sides the spots increase rather in size; on each side, just behind the genital aperture, are also a few similar spots. The genital process is reddish-brown, prominent and conspicuous, the aperture small and characteristic.

*Hab.* GUATEMALA, between Dolores and Chapallal (*Sarg*).

Count Keyserling (who has kindly examined this and other Spiders for me) has labelled it a *Zilla*, but evidently this is an accidental error. As it is, it appears to me undoubtedly a *Meta*, with which all its generic characters exactly agree.

## ARGYROEPEIRA, Emerton.

*Meta,* auctt. ad partem.
*Tetragnatha,* Bl., ad partem.

The genus *Argyroepeira* includes a number of Spiders intermediate between the typical *Meta* and *Tetragnatha*. The legs are long and slender, 1, 2, 4, 3; the first two much the longest, and not greatly different in length. The maxillæ are longer than those of *Meta*, but less in length than those of *Tetragnatha*, broad at the

extremities, and divergent. The sternum is subtriangular. The falces are powerful, but not developing to the remarkable extent usual in *Tetragnatha*. The abdomen is usually subcylindric; stouter, but shorter than in *Tetragnatha*; it is often rather humped before, and its hinder extremity is sometimes prolonged in a quasi-caudal form. All the known species are more or less ornamented with patches, streaks, stripes, lines, or sprinklings of brilliant silver, sometimes varied with black and reddish on a whitish or yellowish, or (I believe) often in life a greenish, coloured ground; occasionally the abdomen is short, very stout, or subglobular.

Considering the typical species of this group to be quite distinct generically from *Meta*, Koch, I had some years ago separated them in MS. under another generic appellation; but no opportunity having occurred for its publication, I was glad to find my views subsequently shared by Mr. Emerton, who, in his able paper on the North-American (or rather New England) Epeiridæ (Trans. Connecticut Academy, vi. 1884, p. 331), has shortly characterized the genus under the name *Argyroepeira*, giving the widely spread and abundant species *A. hortorum*, Hentz, as its type. The true *Meta* has the legs usually stronger and more spiny, and the abdomen of a more sub-triangular form than in *Argyroepeira*, approaching more nearly the larger spiders of the subfamily Linyphiinæ, in the family Theridiidæ. (The palpi of the male in *Argyroepeira* approach those of *Tetragnatha* very nearly in structure, as well as those of *Pachygnatha*, which, until recently, has always been placed in the Linyphiinæ.)

### **Argyroepeira idonea,** sp. n.

*Adult female,* average length nearly $3\frac{1}{2}$ lines.

The *cephalothorax* and other anterior parts are yellow, the extremities of the joints of the legs and of the falces as well as the sternum, maxillæ, and labium more or less tinged with brown or reddish yellow-brown. The normal indentations between the caput and thorax and the thoracic indentation are strong.

The *eyes* are small, in the usual position; the four centrals form a square, whose anterior side is the shortest; the hinder pair are separated from each other by an eye's diameter, and from the hind laterals by at least two diameters. Those of each of the lateral pairs are placed a little obliquely, and contiguous to each other on a slight tubercle. The height of the clypeus is equal to the diameter of one of the fore central eyes.

The *falces* are long and powerful, very much rounded, and prominent towards their base in front.

The *legs* are moderately long and strong, furnished with hairs and a few fine spines, relative length, 1, 2, 4, 3.

The *maxillæ* are rather long, broad, and divergent at their extremities.

The *labium* is rather less than half the length of the maxillæ, rounded at its apex, and has a strong transverse impression about the middle.

The *sternum* is of a subtriangular heart-shape.

The *abdomen* is of a subcylindric form, and projects well over the base of the cephalothorax, but its hinder extremity is vertical, and does not project at all over the spinners. It is covered more or less with coalescing silvery spots or patches, showing a pattern of a dull greyish-black hue consisting of three longitudinal stripes on the upperside, the central stripe throwing off three oblique lines on each side. The sides also have a broad grey-black longitudinal stripe on each side, and on the underside the silvery markings merely indicate a nearly obsolete transverse curved bar. The genital process and aperture is small and inconspicuous, but characteristic in form.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is closely allied to *A. hortorum*, Hentz, but may be distinguished by the form of hinder part of the abdomen, this part in *A. hortorum* when looked at in profile always projecting perceptibly over the spinners, while in *A. idonea* it is simply vertical, the markings in *A. hortorum* being also more vivid; there is a good deal of a greenish-yellow tinge on the silvery parts, and the darker portions are much intensified in hue at the hinder extremity, being quite black in some examples. The underside also has a very distinct **V**-shaped silvery marking towards the spinners, the space enclosed being quite black. There is also a difference in the form of the genital aperture in the two species. In other respects, both in colours and in the general character of the markings, they are very similar.

Seven examples were captured by Mr. Champion in Chiriqui.

## **Argyroepeira acuminata,** sp. n.

*Adult female*, length 4½ lines.

In general appearance, colours, and markings this spider closely resembles *A. idonea* and *A. hortorum*. It may be easily distinguished from the former by the more protuberant form of the anterior portion of the abdomen, and the rather considerable prolongation of the slightly tapering posterior extremity over the spinners; the oblique dashes of sooty-grey, which divide the two longitudinal central silvery stripes on the upperside of the abdomen, are in the present species mere slender lines, and the silvery stripes on the sides are more distinctly defined; the silvery markings also, generally, are often much suffused with reddish-golden and greenish-yellow hues, and the underside has simply a narrow silvery edging or line. Most of these characters will also serve to distinguish *A. acuminata* from *A. hortorum*, in which the hinder part of the abdomen is much less prolonged, but more distinctly marked with black. The genital process and aperture are of characteristic form.

*Hab.* PANAMA, Bugaba, Tolé (*Champion*).

Several examples. These are on an average rather larger than the usual run of the specimens I have of *A. hortorum*, Hentz; but a difference of size can scarcely be relied upon as a specific character, except as the result of a comparison of a large series of specimens.

## **Argyroepeira debilis,** sp. n.

*Adult female*, length 2 lines.

*Cephalothorax* short, but otherwise of ordinary form, and together with the falces, maxillæ, labium, and palpi of a pale yellowish hue. The colour of the legs is yellow-brown, and the sternum is of a deeper hue.

The *eyes* are on black spots, and in the usual position, but more closely grouped than in some other species, the interval between those of the hind central pair being a little greater than that between each and the hind lateral eye next to it; in another example, however (not adult), the interval seems less, but as the example appears to have been when captured just about to moult, it is possible that the apparent position of the eyes is not the correct one, otherwise it would point to a specific difference in the two spiders. The height of the clypeus is less than the diameter of one of the fore central eyes.

*Falces* moderate in length, prominent towards their base in front, and a little divergent towards the extremities.

*Legs*. These appear to have been moderately long, but as they were greatly damaged, their actual length could not be ascertained; relative length, 1, 2, 4, 3.

*Maxillæ* long, enlarged and rounded and divergent at their extremity.

*Labium* somewhat rounded at the apex, half the length of the maxillæ, and strongly impressed transversely a little below the apex.

*Abdomen* short, greatly elevated above, nearly globular, and greatly projecting over the base of the cephalothorax. It is of a dull leaden-blackish hue, thickly spotted above and on the sides with small silvery spots, and along the middle of the hinder half is a double series of darker blackish spots arranged in five pairs, the two lines which they compose converging together a little as they approach the spinners. The underside is dark leaden-blackish, with a transverse band of similar spots to those on the upperside. The genital aperture is small and inconspicuous, but characteristic, but less thickly spotted.

*Hab.* PANAMA, Bugaba (*Champion*).

Two examples of this spider were contained in Mr. Champion's collection from Chiriqui. In its short form *A. debilis* comes near the typical *Meta*, Koch.

## **Argyroepeira curta,** sp. n.

*Adult female*, length slightly over $1\frac{1}{2}$ line.

The whole of the fore part of this small species (including the cephalothorax, legs, palpi, falces, maxillæ, labium, and sternum) is of a yellowish hue, the region of the leg-joints rather suffused with brownish.

The *eyes* are rather compactly grouped together, and seated on black spots. The interval (in an adult example) between the central pair of the posterior row is slightly greater than that between each and the lateral eye of the same row next to it, while in an immature, but rather larger, example it is smaller. The height of the clypeus is less than the diameter of one of the fore central pair of eyes.

The *legs* are furnished with a few very fine spines; their relative length appears to be 1, 2, 4, 3, but they are much damaged in the only adult example examined. The form and structure of the *maxillæ*, *labium*, and *sternum* are normal, and the *falces* are tolerably long and strong, and prominent near their base in front.

The *abdomen* is rather short and stout, but of a subcylindrical form, a little elevated or prominent above at the posterior extremity, which falls vertically to the spinners. The ground-colour is a dull yellowish-drab, marked with the ordinary silvery markings of this group, and after very much the same pattern; or it might be described as silvery on the sides and upperside, marked along the middle of the upperside with a broadish, somewhat tapering, yellow-drab band emitting several short oblique bars directed backwards on either side, two or three of these being near the hinder extremity. On each side of the almost vertical extremity is a conspicuous, nearly round, silvery patch. On the middle of the underside are three conspicuous silvery spots or blotches forming a transverse, somewhat curved or open-square stripe, the open side directed backwards. The genital aperture is characteristic in form, but small, reddish-brown, and inconspicuous.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Argyroepeira fragilis,** sp. n.

*Adult female*, length slightly over $1\frac{1}{2}$ line.

In form and general characters this spider is very like *A. hortorum*, Hentz, and some other closely allied species. It is, however, much smaller than *A. hortorum*, and (unless the only example I have seen is an abnormally coloured one) much paler and less distinctly marked, though resembling it in pattern.

The sides and upperside of the *abdomen* are densely silvery with a dull drab-yellow longitudinal central tapering stripe on the upperside, emitting three oblique lines of the same on either side, and a curved horizontal line of a similar colour on each side. The underside is dull drab-yellow, margined with a distinct silvery line which encloses the greater part of the space between the spinners and the genital aperture. This portion of structure is reddish-brown, tolerably conspicuous, and of characteristic form.

The *abdomen* is subcylindric in form, the hinder extremity vertical.

The colour of the whole of the fore part, including the cephalothorax, falces, legs, palpi, maxillæ, labium, and sternum, is a pale yellowish.

The *falces* are strong and prominent at their base in front.

The *maxillæ* are long, nearly squarely truncate at their extremities, divergent, and more than double the length of the labium, which with the maxillæ and sternum are somewhat suffused with brown.
The *legs*, 1, 2, 4, 3, are not very long, but moderately strong, and furnished with a few slender spines.

*Hab.* Costa Rica (*Rogers*).

A single example, in bad condition, but quite recognizable.

### **Argyroepeira lepida,** sp. n.

*Adult female*, length 5 lines; length of cephalothorax rather over $1\frac{1}{2}$ line, of abdomen $3\frac{1}{2}$ lines.
The *cephalothorax* of this fine and distinct species is yellow, with a broad longitudinal central band, and a narrower marginal border of rich bistre brown; the central band continues quite through the ocular area, and meets the marginal border round the clypeus.
The *eyes* are in three groups, unusually separated for this genus; the central group form a small quadrangle, whose longitudinal is greater than its transverse diameter. Those of each lateral pair are rather widely removed from the central group, and are contiguous to each other.
The *legs* are long, 1, 2, 4, 3, moderately strong, yellow, broadly annulated with dark yellowish-brown, armed with spines, apparently rather stronger than usual, though most of them are broken off near their base. The metatarsi and tarsi of the first two pairs are furnished with two or more longitudinal rows of numerous strong, rather spur-like, divergent bristles.
The *falces* are shorter than the cephalothorax, very strong and massive, rather divergent, porrected, convex in front; the profile regularly curved, dark yellow-brown, softening into yellow in front and on the underside.
*Maxillæ* two thirds the length of the falces, divergent, and of the usual form, dark yellow-brown with reddish-yellow inner margin.
*Labium* less than half, but more than one third, the length of the maxillæ, oblong, rounded at its apex, dark yellowish-brown; the apex paler.
*Sternum* reddish yellow-brown, paler along the middle.
*Abdomen* long, tolerably stout, subcylindric, the upper part of the posterior extremity projecting a little in a subcaudiform manner over the spinners. It is of a dull drab ground-colour, thinly spotted with minute silvery dots; at each corner of the fore extremity is a slight subconical prominence, from the inner side of each of which a jet-black rather irregularly angulated stripe runs backwards to the posterior extremity, the band enclosed by these stripes being rather darker than the rest of the ground-colour; the sides are also broadly, but irregularly, marked with black; and the underside has a longitudinal central yellow-brownish band margined with an indistinct darker line on which, near the middle (on each margin), is an elongate black patch or large spot; on each side of this central band is a stripe of a paler hue spotted with small silvery spots. The genital aperture is small, not very conspicuous, but characteristic.

*Hab.* Panama, Bugaba (*Champion*). Two examples.

## TETRAGNATHA, Latreille.

### **Tetragnatha cognata,** sp. n.

*Adult female*, length 4 lines; *adult male*, slightly over 2 lines.
This spider is nearly allied to the common European and British form *T. extensa* (Linn.), which it resembles very closely in general appearance, size, colours, and markings, as well as in the position of the eyes; but it may be readily distinguished by the much shorter and proportionally stronger falces in both sexes, which are also differently armed in the male, and in the form of the palpi and palpal organs of the latter sex.
*Falces* of the male less in length than the cephalothorax, rather strongly bent and divergent, a little gibbous on the outer side towards the fore extremity, parallel to which on the upperside a short, moderately strong, curved, obtusely pointed tooth is directed forwards. The fang is about three fourths the length of the falx, evenly curved, and lies along between two rows of denticulations, of which the two terminal ones on the upperside forwards are much stronger than the rest; near behind the point of the fang, as it lies at rest, is a blunt tubercular prominence.
The *palpi* of the male are not very long; the cubital is slightly shorter than the radial joint, and is a little

nodiform. The digital joint is long. The palpal organs very much of the ordinary form common to this genus, with a twisted prolongation at their extremity, which reaches quite to the end of the digital joint. In the *female* the falces want the curved tooth towards the fore extremity of the upperside.

*Hab.* GUATEMALA, Volcan de Fuego, Cunen, Santa Ana, Cahabon (*Sarg*).

Several females and a single male were contained in Mr. Sarg's Guatemalan collection.

## **Tetragnatha guatemalensis,** sp. n.

*Adult female*, length 3½–5 lines; *adult male*, 3–4 lines.

This species is also very nearly allied to *T. extensa* (Linn.), but may be distinguished by the greater length of the abdomen. The curved denticulation near the upper fore extremity of the falces of the male is less distinctly bifid at its point. The fang also is shorter, and near, a little way behind, its point, when at rest, is a large obtuse tubercular prominence. The palpi and palpal organs of the male are also very nearly alike in the two species, but in the present one the radial joint appears to be proportionally rather longer, being at least double the length of the cubital joint. The legs are also longer, especially those of the first pair, and the abdomen of the female is of a more regular cylindrical form.

*Hab.* GUATEMALA, Cahabon, Laguna de los Coheteros near Coban (*Sarg*, *Champion*).

Both sexes were contained in the collections of Mr. Sarg and Mr. Champion.

## **Tetragnatha tenuis,** sp. n.

*Adult female*, length 4 lines; *adult male*, 2½ to a little over 3½ lines.

The whole of the fore part of this spider is a dull pale yellowish-brown; the abdomen is long, slender, cylindrical, at least, or over, three times the length of the cephalothorax in the male and four times in the female; it is of a uniform dull yellowish-drab, tolerably thickly spotted above and on the sides with minute silvery spots; in one example there are traces of a longitudinal, rather darker band along the upperside, with some deeper linear spots along its margins.

The *legs*, which are of great length and tenuity, 1, 2, 4, 3, have at the articulation of the joints a slight brown suffusion. The spines are few and exceedingly fine.

The *eyes* are in the ordinary position; those of each lateral pair are distinctly separated by at least a diameter of the anterior eye.

The *falces* are much shorter than the cephalothorax, bent, divergent, a very little gibbous on the outer side towards the anterior extremity, near which, on the upperside, is a moderate-sized denticulation, slightly bent near its obtuse or very slightly notched extremity; below this, on the inner side, is another (belonging, in fact, to one of the two rows within which the fang lies at rest) as long and strong, but straight and sharp-pointed. The fang is simply curved, and about three fourths the length of the falx; a little way from its point is a small protuberance.

The *palpi* (male) are rather short, the cubital and radial joints of equal length. The digital joint is moderately long; and the main lobe of the palpal organs is rather large and prominent and extends halfway to the extremity of the digital joint, and the process issuing from the lobe is very nearly straight and reaches to the end of the joint.

The sexes are very nearly alike, though, as is usually the case, the legs of the female are not so long, and the falces of that sex are shorter and have no denticulation on the upperside of the fore extremity.

*Hab.* GUATEMALA, Cahabon, upper road to Chichochoc near Coban (*Sarg*); PANAMA, Bugaba (*Champion*).

Both sexes were contained in Mr. Champion's collection from Bugaba, Chiriqui, and females in that of Mr. Sarg. It is probable that in the living examples green would be the preponderating colour in this, as well as in some other species, whose colours in spirit of wine are dull yellowish, or drab, or dull yellow-brown.

## **Tetragnatha longa,** sp. n.

*Adult female*, length 4 to over 5 lines; of cephalothorax 1–1¼, of abdomen 3–3½ lines. Length of an *adult male*, 4 lines; of abdomen 3 lines.

This spider is allied to *T. tenuis*, but may be easily distinguished by the cephalothorax being marked with four longitudinal brown stripes (a submarginal one on each and two near together along the middle; these last are rather irregular, and tend to run together into one). The eyes also of the lateral pairs are separated from each other by nearly as wide an interval as that which divides the fore and hind central eyes; the interval appears to be greater in the female than in the male. The eyes of the hind central pair are wider apart than each is from the hind lateral on its side, the fore centrals being nearer together than each is from its fore lateral eye.

The *legs* are very long and slender, 1, 4, 2, 3; their colour is greenish-yellow, the spines short and weak, and issuing from small obscure dusky spots.

The *falces* less in length than the cephalothorax, moderately strong, divergent, but not excessively so, those of the male having a not very large, curved, tapering, not very sharply, but simply pointed denticulation directed forwards near the fore extremity on the upperside; besides this there are no other denticulations, excepting the two rows of much smaller ones between which the fang lies when at rest.

The *palpi* of the male differ from those of *T. tenuis*. They are short; the cubital joint is shorter, though more than half the length of the radial. The *palpal* organs are of the usual general structure; the main lobe extends to half the length of the digital joint, and the terminal process is strongly twisted and its point projects just beyond the end of the digital joint. There is also a circularly curved, black, tapering spine at the fore part of the main lobe, the filiform ends of the spine threading as it were the twist of the terminal process.

The *abdomen* is long, slender, and cylindrical; it is of an obscure greenish-yellow hue, thickly stippled above and on the sides with small silvery spots, and the upperside has an indistinct, dark, irregular marginal line on each side. The underside is blackish-brown. The *sternum* is also darkish yellow-brown, the *maxillæ* and *labium* only tinged with that hue.

*Hab.* GUATEMALA, Polochic valley between Tucuru and Chamiquin, and Salinas de Nueve Cerros (*Sarg*).

## **Tetragnatha tenuissima,** sp. n.

*Adult female*, average length 5 lines; of abdomen 4 lines. *Adult male*, average length a little over 3½ lines; of abdomen slightly over 1 line.

The *cephalothorax* of this very slender and attenuated species is marked with some dusky-brown lines on the normal indentations, the ground-colour being yellowish with a brown tinge.

The *eyes* of the lateral pairs are near together but not contiguous; in other respects their position resembles that of *T. longa*.

The *legs* are excessively long, 1, 4, 2, 3; those of the first pair are, in the male, at least three and a half times its own length. The spines are very short and slender; they are like the cephalothorax in colour.

The *palpi* (of the male) are moderately long, very slender, similar in colour to the legs; the cubital is a little longer than the radial joint; the digital joint is long, longer than the radial and cubital joints together; the main lobe of the palpal organs does not reach halfway towards the end of the digital joint. The terminal process, twisted at its base, extends, in conjunction with a black spine, quite to the end, if not slightly beyond, the extremity of the digital joint.

The *falces* are long, equalling in the female, exceeding in the male, the length of the cephalothorax; they are rather slender, very divergent, strongly bent, enlarging towards their extremities, near which, on the upperside, is a long, strongly bent (almost hooked at its end) tooth, directed forwards, and with a prominent point near its extremity on the upperside, giving the end of the tooth a more or less strongly bifid appearance; on the inner side of this tooth is a simple, straight, and not half so long a denticulation, and some little way behind it, rather on the inner side, is another, the latter strong, straight, or only very slightly curved, and sharp, directed inwards. These two articulations, in fact, belong to the normal two rows between which the fang is disposed when at rest; but they are here (as in many other allied

species of this genus) misplaced and exaggerated in strength. The fang is curved, as usual, but it is a little bent also in the middle.

The *maxillæ*, *labium*, and *sternum* are yellow-brown.

The *abdomen* is long, slender, cylindrical; in colours, ornamentation, and markings it appears to differ little (at least in the preserved examples) from that of *T. longa*, from which, however, this spider may easily be distinguished by the narrower interval between the lateral eyes, and especially by the far longer and differently armed falces, as well as by the length of the radial and cubital and digital joints of the palpi, and the structure of the palpal organs.

*Hab.* GUATEMALA, upper road to Chichochoc near Coban, Tamahu (*Sarg*); COSTA RICA (*Rogers*); PANAMA, Bugaba (*Champion*).

## **Tetragnatha pallida,** sp. n.

*Adult female*, length $4\frac{2}{3}$ lines; length of abdomen over $3\frac{1}{2}$ lines. *Adult male*, $3\frac{1}{4}$ lines; length of abdomen $2\frac{1}{3}$ lines.

The whole of this spider is of a straw-yellow, the abdomen, which is rather duller in its hue, thickly stippled over the upperside and sides with small distinct silvery spots, with no trace (in the adults) of any darker markings whatever; in two immature specimens (if, indeed, they belong to this species) there are some detached linear dusky spots, forming two longitudinal lines along the upperside, between which the colour is darker than the rest.

This species is even of a more attenuated and delicate form than either *T. tenuis*, *T. longa*, or *T. tenuissima*, from all which it may easily be distinguished by the great length of the digital joints of the male palpi, and the armature and length of the falces.

The *eyes* of the lateral pairs are divided by very nearly an equal interval from each other as those of the fore and hind central pairs of eyes, so that the eight eyes form almost two concentrically curved rows. The eyes of the hind central pair are separated by an interval rather less than that which divides each from the hind lateral on its side, and the four cubitals form an almost exact square.

The *legs* are of great length and tenuity, 1, 4, 2, 3, and armed with (some of them) rather longish black slender spines.

The *falces* are, in the female, equal to or longer than the cephalothorax; in the male, considerably longer. They are bent, but not very strongly, slender (but shorter in the female), strongly divergent, cylindrical, enlarging, but not greatly, towards their extremity, on the upperside of which, close to the end and directed forwards, is a strong curved denticulation, whose basal half is stronger than the other half, which is sharp and unguiform. The normal two rows, along which the fang lies at rest, are rather close together and none of its denticulations near the anterior end are out of place or much longer than the rest. The fang is simply curved.

The *palpi* are moderately long, very slender; the cubital is not quite so long as the radial joint; the digital joint is of great length, distinctly longer than the radial and cubital joints together; the main lobe of the palpal organs (which is rather large and prominent) does not extend more than one third from the base towards the extremity of the digital joint, and the process issuing from the lobe is very long, slightly twisted but straight, and in connection with a long pale spine reaches very nearly to the end of the digital joint. The radial joint is furnished with some long, prominent, slender, pale hairs.

The *abdomen* is attenuated and cylindrical, but a little tapering from in front backwards in the female; it is in the adult entirely devoid of markings, excepting a blackish suffusion at the spinners. It is over three times the length of the cephalothorax.

It is very possible that in this, as in some other instances, the colour of the spider may in life be of some tint or other of green, but I have no information on this point.

*Hab.* PANAMA, Bugaba (*Champion*).

Several examples.

## **Tetragnatha tropica,** sp. n.

*Adult female*, length rather over 5½ lines; length of cephalothorax 1⅔ line.

The *cephalothorax* is of a reddish-yellow-brown hue with a broad rich brown marginal border, and convergent lines of the same hue met at the thoracic junction by two central longitudinal ones over the caput.

The *eyes* are in the ordinary position; those of the central group form a quadrangle whose longitudinal is a little less than its transverse diameter, and its fore side slightly shorter than its hinder one. They are all on black spots, and the intervals between those of the posterior row are equal; those of each lateral pair are near together, but not contiguous.

The *legs* are moderately long and strong, 1, 4, 2, 3; they are of a paler colour than the cephalothorax, deepening in hue at the joints, and armed with a few, not very strong, spines on all excepting the tarsal and metatarsal joints, and issuing from small dark spots.

The *falces* are equal in length to the cephalothorax, strong, divergent, bent, and enlarged at the middle on the inner side; the denticulations of the two normal rows, between which the fang lies at rest, are numerous, not very strong, but subequal, and the upper row stops short about one third of the length of the falx from the articulation of the fang. The fang is powerful, only half the length of the falx, curved and a little bent near the middle. The colour of the falces resembles that of the cephalothorax.

The *maxillæ*, *labium*, and *sternum* are dark brown; the first have a yellow vitta along their inner margin, and the last a narrow, central, longitudinal reddish-yellow streak.

The *abdomen* is rather more than three times the length of the cephalothorax. It is comparatively stout, subcylindric, rather abruptly compressed, and tapering from its middle backwards; it is of a dull leaden-blackish hue, covered pretty thickly above and on the sides with small silvery and greenish-golden spots; along the upperside is a rather darker broad central vitta, with a somewhat boldly angular margin, and marked on its edges here and there with a dark suffused spot; several of these spots are more conspicuous just above the spinners, where the end of the abdomen is bluff and rounded. The underside has a long, rather narrow, dull blackish, longitudinal vitta from end to end.

*Hab.* GUATEMALA, Menché (*Sarg*).

A single example. This is a fine species, and will be easily determined by the colour and markings of the cephalothorax and other specific characters above detailed.

### EUGNATHA, Savigny.

## **Eugnatha gracilis,** sp. n.

Scarcely *adult female*, length 5 lines; *adult male*, 4 lines.

The whole spider is of a pale yellowish hue, the *cephalothorax* slightly tinged with orange-brown, and at the articulations of the leg-joints is a slight suffusion of red-brown, and the upperside and sides of the *abdomen* thickly stippled with small yellowish-silvery spots. This is from the specimen preserved in spirit. Mr. Sarg's description, taken from the same example in a living state, is:—"General colour light lemon-green. Abdomen marked above with a broad band of silver spots (stippled), which give it a yellowish appearance; on either side of this is a line of Indian red, beginning uninterrupted at the fore end and continued by six spots, the first four elongated, the last two close together at the hinder extremity. Below this line the green is more intense, forming an indistinct band, shading off into paler on the underside. Thorax pale lemon-green with the margins darker; falces semitransparent, teeth red; legs green, with red spines and red joints. A very beautiful Spider." From this it will be seen how entirely the green, and even how the red markings have disappeared under the action of spirit of wine. Still it is necessary to describe its appearance in this condition to avoid misleading collectors who, having only preserved examples before them, might think the plain colours of these denoted either a natural variation or possibly a distinction of species.

♀. The *cephalothorax* is of the ordinary form.

The *eyes* very small, on black spots; the central four form very nearly a square, the posterior side being slightly longer than the rest; the two eyes forming this side are the largest of the eight. The interval between the eyes of each lateral pair is greater than that between the hind and fore centrals, being about

equal to that between those of the hind central pair. The height of the clypeus is nearly equal to half that of the facial space.

The *falces* are of great length, moderately strong, subcylindrical, bent, and extended laterally almost at right angles with the caput. Fang about three fourths as long as the other part, and when at rest lying along it between two rows of moderately strong subequal denticulations.

The *legs* are very long and slender, 1, 2, 4, 3, armed with long and slender spines.

The *palpi* are rather long, slender, and armed (though sparingly) like the legs.

The *abdomen* is long, quite twice the length of the cephalothorax, cylindrical, and scarcely differs in size throughout. The posterior extremity is obtuse, truncated vertically, and the spinners small and closely grouped immediately before the inferior side of the truncation. As the specimen is scarcely adult the genital process is not developed.

The *male* resembles the female in general appearance; but its legs, especially of the first pair, are longer in proportion and more slender, the spines, however, being shorter and less strong.

The *falces* are longer, less strong, and have at the anterior extremity, on the upperside near the articulation of the fang, a longer and rather stronger than the rest, curved, tapering, pointed denticulation. The length of the falces in this sex exceeds that of the cephalothorax; the simply curved fang also is proportionally longer, extending to nearly the basal articulation of the falx, at any rate exceeding three fourths, or even five sixths, of its length.

The *palpi* of the male are moderately long, very slender; the radial joint is distinctly more than double the length of the cubital; the digital joint is as long as the radial, and the main palpal lobe extends distinctly less than halfway along the digital joint, but is continued to its extremity by a nearly straight, tapering process.

The *maxillæ* and *labium* are normal in both sexes.

The *abdomen* of the male is longer and slenderer than that of the female; in the latter it is about twice, while in the male it is about two and a half times the length of that of the cephalothorax; but of course the length of that of the female will vary somewhat according to whether distended with eggs or not.

*Hab.* GUATEMALA, Cubilguitz, San Juan Chamelco (*Sarg*).

The female was found at Cubilguitz and the male at San Juan Chamelco.

## AZILIA, Keyserling.

This well-marked genus shows evident affinity with *Meta* on the Epeirid side, and *Linyphia* as approaching the Theridiidæ.

The *cephalothorax* is longer than broad, the anterior part of the caput not more than half the breadth of the thorax; caput rather elevated and very distinctly defined by a deep groove separating it from the thorax.

The *eyes* unequal, in two curved rows at the upper extremity of the caput, the convexity of the curve directed forwards, but the anterior row shortest and most curved, while the eyes of each lateral pair are widely separated from each other.

The *legs* moderately long, rather strong, 1, 2, 4, 3, armed with distinct but short fine spines.

The *maxillæ* moderately long, slightly divergent, widening gradually to their extremities, which are slightly obliquely truncated.

The *labium* broad, rather rounded at the apex, and about half the length of the maxillæ.

The *sternum* heart-shaped, longer than broad.

The *abdomen* large, oval, and projecting well over the thorax.

### **Azilia guatemalensis,** sp. n.

*Adult female*, length from 3 to $4\frac{1}{2}$ lines; *adult male*, $2\frac{1}{2}$ lines.

*Cephalothorax* pale yellow; the caput, whose fore part is rather prominent, and the ocular area broad and sloping forwards, is deep bistre-brown, prolonged in a central, rather tapering band over the thorax,

which has a broad well-defined lateral band on each side of a similar colour; in fact some specimens might be perhaps more correctly described as having the cephalothorax bistre-brown, with a longitudinal yellow band on each side of the median line of the thorax. The thorax is a little gibbous on each side towards the fore part, near the groove which separates it from the caput.

The *eyes* are rather large, on black spots, seated on slight tubercles; looked at from above and behind they form a nearly semicircular figure, the posterior row forming the rather hollow or curved chord of the arc described by the anterior row. The four central eyes form a largish square whose anterior side is rather shorter than the rest. The interval between the eyes of the hind central pair, which are the largest of the eight, is greater than that between each and the hind lateral eye next to it, and the same relative position holds good also in respect to the fore central and fore lateral eyes. The four central eyes form a large square, whose anterior side is shorter than the rest. The interval between the eyes of each lateral pair is equal to that between the fore central pair of eyes. The height of the clypeus is equal to the diameter of one of the fore central eyes.

The *falces* are rather long, tolerably strong, slightly divergent towards their extremities, and of a deep rich brown colour.

The *legs* are broadly and distinctly banded with alternate rings of deep brown and yellowish. The length of the first pair is distinctly greater than that of the second.

The *maxillæ* are deep brown, narrowly edged at their extremities with pale dull whitish; and the *labium* is of the same hues.

The *sternum* is deep black-brown, with a longitudinal central, more or less perfect yellowish stripe.

The *abdomen* is thickly marked and mottled with brown of different depths, yellow-brown, and white. In most examples the pattern is very obscure owing to the mottlings running into each other; but in some a white longitudinal central stripe on the upperside, emitting short lateral ones at right angles with it, is visible, and at the extremities of these lateral stripes the somewhat larger and darker brown markings form an irregular longitudinal broken line on each side. The dark markings on the sides run into lines, some parallel-longitudinal, some oblique. The underside is deep brown, edged laterally with a line of white spots. The spinners are short, tolerably compact, the two inferior ones dark black-brown, the rest pale, with a blackish spot or blotch on the outer side. The abdomen immediately above the spinners has a largish, rather pale, somewhat subtriangular patch of a yellowish-white hue. The genital process is simple in form, and slightly prominent.

The *male* resembles the female, except in being much smaller, the first pair of legs much longer in proportion; and the spines longer and stronger.

The *palpi* of the male are short, dull yellowish; the cubital joint has a single longish, prominent, tapering bristle in front, and the humeral joint has a prominent point beneath the fore extremity. The palpal bulb is rather small; the palpal organs consist chiefly of a large smooth corneous lobe encircled on their outer side by a black tapering spine whose filiform point is in contact with the extremity of the oval digital joint; and at the base of the bulb (on the outer side) is a not very large, curved process, much like one found in a similar position in so many of the Theridiidæ.

*Hab.* GUATEMALA, Gualebalix on the Rio Negro two leagues south of Salinas de Nueve Cerros, between Dolores and Chapallal, Encuentros de Boloneb, Senahu, Cahabon, Tamahu, Salama (*Sarg*); PANAMA, Bugaba (*Champion*).

Apparently an abundant species in Central America; most of the specimens received (in fact, all except one) are females.

## MANGORA, gen. nov.

Nearly allied to *Epeira*.

*Cephalothorax* longer than broad, tapering gradually to the fore extremity; lateral constrictions at caput very slight. Thorax very gibbous, and much higher than the caput; the profile sloping gradually from the highest part to the ocular area, the anterior portion of which projects a little. Clypeus narrow.

*Eyes* closely grouped in four pairs at the extreme part of the caput, rather unequal in size; the hind central pair the largest; they are in two curved rows whose convexities are directed away from each other, describing a regular, transverse oval figure.

*Legs* not very long, 4, 1, 2, 3, those of 4, 1, 2 not differing much in length. They are armed with long, but not very strong spines.

*Falces* short and rather weak, vertical.

*Maxillæ* short, rounded at the extremity, somewhat bent and inclined to the *labium*, which is short and very slightly pointed at the apex.

*Abdomen* rather broadest behind, being somewhat drawn out before, and projecting greatly over the thorax.

## **Mangora trilineata,** sp. n.

*Adult female*, length $1\frac{2}{3}$ to 2 lines.

*Cephalothorax* brownish-yellow marked with three longitudinal deep bistre-brown lines, a central, and a submarginal lateral one on each side. The central line scarcely reaches the ocular area, and all three are plainly visible in all specimens, but not always equally strong.

The *legs*, *falces*, *maxillæ*, *labium*, and *sternum* are similar in colour to the cephalothorax; in some examples the legs are of a rather brighter hue.

The four central *eyes* form a quadrangular figure whose longitudinal diameter is greater than its transverse one, and its anterior side the shortest. Those of each lateral pair are seated very slightly obliquely, but contiguous to each other.

The *abdomen* is of a yellow-brown ground-colour, with a longitudinal dentated band on the upperside, varied with black and deep yellow-brown; this band is broadest on the hinder half (in some examples it is obsolete on the fore part), and some short lateral blackish stripes often connect the angles with an irregular longitudinal lateral black stripe, so that both the angles themselves, as well as the connecting and lateral stripes, are often scarcely visible, and sometimes obsolete; but the ground-colour on the upperside and sides is spotted more or less densely with silvery spots, and this applies to all the examples I have seen. The underside has a few silvery spots on each side, but they are often wanting. It may thus be seen that the abdominal pattern is liable to much variation in respect to its completeness, but it is generally traceable, and characteristic enough for determination. The genital process is small, inconspicuous, and but very slightly prominent when looked at in profile.

*Hab.* GUATEMALA, Cubilguitz, Cahabon, Chiacam, Tamahu, Chicoyoito (*Sarg*); PANAMA, Bugaba (*Champion*).

Numerous examples.

## **Mangora picta,** sp. n.

*Adult female*, length $1\frac{1}{2}$ line; *adult male*, very slightly over 1 line.

In its form, colours, and markings this spider is exceedingly like *M. trilineata*, and the abdominal pattern presents the same variations. It is, however, a smaller spider. The hind central pair of eyes are rather larger and nearer together. The genital process of the female is very different, being conspicuous and prominent.

The *male* resembles the female in colours and markings, but the spines on the legs are stronger.

The *palpi* are very short, the cubital joint has a long, curved, tapering, filiform, pointed spine at its fore extremity. The palpal bulb is globular. The palpal organs are well developed and prominent, but not very complex, with a black tapering spine curved in a circular form beneath their anterior extremity.

*Hab.* GUATEMALA, Choctum, Cahabon, Chisec, Patexbatun, Cubilguitz, Chiacam, San Juan Chamelco, Tucuru, Senahu, Yzabal (*Sarg*).

## EPEIROIDES, Keyserling.

The genus *Epeiroides*, established in 1884 by Count Keyserling on a spider from Bahia, appears to differ little from *Epeira*, excepting in the entire absence of spines from the legs, and in the somewhat more elevated form of the abdomen. This latter, it is probable, however, will be found to be only a specific character. It seems to bear to the genus *Epeira* about the same relation as *Theridiosoma*, Cambr., bears to *Theridion*; and indeed to come very near to the Theridiidæ, and to approach very close to *Theridiosoma*, which stands at one point of the departure of the Theridiidæ from the family Epeiridæ.

### **Epeiroides fasciolata,** sp. n.

*Adult male*, length nearly 1 line.

*Cephalothorax* rather short and broad, but of ordinary *Epeira*-form; it is of a yellow-brown colour, the thoracic grooves marked by white lines, those following the division of the caput from the thorax continued a little way backwards on each side of the central thoracic indentation, marked by a dark red-brown patch, from which a dark reddish central line runs to the ocular area, which is also of a red-brown hue.

The *eyes* are of moderate size, in the ordinary three groups, but not widely separated from each other, in fact they might be simply described as in two transverse curved rows, the four central eyes, seated on a prominence, being larger than the rest, though apparently themselves of about the same size; they form a square whose anterior side is slightly the longest; the anterior eyes being about an eye's diameter from the lower margin of the clypeus. The eyes of each lateral pair are contiguous to each other, and seated on a tubercle.

The *falces* are neither very long nor strong; they are similar in colour to the cephalothorax, and very slightly directed backwards.

The *legs* are moderately long, but not very strong, 1, 2, 4, 3, those of the second pair being decidedly longer than the fourth; they are of a red-brown hue, annulated sparingly with yellowish, or dull orange; and are clothed with fine hairs only, being totally destitute of spines or even bristles.

*Palpi* short, yellowish; palpal bulb red-brown, and of moderate size. The cubital and radial joints are very short, without enlargements or apophyses, with one or two fine bristles, and a few hairs. The digital joint is large; it has no curved process at its base on the outer side, such as in some form or other is usual in the genus *Epeira*, and it has an ordinary clothing of hairs only. The palpal organs are well developed, but not very complex, with a somewhat toothed corneous process beneath their extremity.

The *maxillæ* are reddish-brown, pale at their extremities, and margined on the outer side with a distinct black line for about half their length. In the bent form of the maxillæ, which incline strongly towards the labium, this spider certainly approaches the Theridiidæ.

The *labium* is very short, broad, somewhat angular at the apex, which is broadly pale, the rest being reddish-brown.

The *sternum* is large, of a somewhat subtriangular heart-shape, and rather convexly prominent; its colour is yellowish-white, edged with an irregular, rather suffused border of red-brown.

The *abdomen* is rather large, oval, prominent or humped above towards the fore part, the highest point marked with a small roundish prominence on each side; its colour is yellow-brown, marked, but not very regularly, with red-brown and white markings; the fore part in front of the two prominences is spotted with red-brown, and has a few white spots and markings along the median line; behind the prominences are one or two transverse white broken lines, and behind these are two indistinct, angular, longitudinal red-brown lines converging towards the spinners, and including between their anterior extremities one or two white spots; the sides also are marked with some oblique broken lines of white spots and marks. The underside is of a uniform reddish-brown hue; spinners of the same colour, very short and compact.

*Hab.* PANAMA, Bugaba (*Champion*).

## EPEIRA, Walckenaer.

The large genus *Epeira* of Walckenaer has, since his days, been considerably curtailed; it still, however, as now recognized by most araneologists, includes a rather heterogeneous mass of species. All seem to agree fairly well in regard to several leading generic characters, though in some the exact form of the cephalothorax diverges a good deal from the ordinary generic type. The portion of structure presenting the widest range of difference is the abdomen; while, therefore, making no attempt here to subdivide this genus, I have roughly arranged the new species received from Central America according to the leading characters of the abdominal form; this is, however, intended chiefly to narrow as much as possible the field within which collectors may have to search for the identification of species, for the mere form of the abdomen, certainly in this group, will scarcely now, I imagine, take rank as a good generic character.

### **Epeira tetragnathoides,** sp. n.

*Adult female*, length $2\frac{1}{2}$ to $3\frac{1}{2}$ lines; *adult male*, slightly over 2 lines.

*Cephalothorax* of ordinary form; colour brownish-yellow tinged with orange, bisected longitudinally by a tapering, somewhat irregular, black stripe, and with a narrow black margin.

*Eyes* on black spots in the usual position; the anterior pair of the central group (which forms a square whose hinder side is considerably the shortest) are larger than the posterior pair, which are almost contiguous to each other; the anterior pair are close to the lower margin of the clypeus.

The *falces* are strong, prominent in front, and like the cephalothorax in colour.

The *legs* are long, slender, 1, 4, 2, 3, similar in colour to the cephalothorax, and closely mottled and minutely spotted, chiefly in front, with black; the first two pairs also marked with a longitudinal black line in front of the femora, tibiæ, and metatarsi. The legs are furnished with hairs, slender bristles, and fine spines.

The *palpi* are like the legs in colour and markings.

The *maxillæ* and *labium* are also brownish-yellow blended with a deeper hue. The former are very slightly divergent, and a little longer than those of the typical *Epeira* in form.

The *sternum* is black-brown, marked along the middle with a broad brownish-yellow band.

The *abdomen* is elongate-oval, projecting considerably and in a somewhat pointed form over the thorax and also behind a little over the spinners. The upperside is blackish-brown, marked on each side with a slender longitudinal wavy pale line, containing a series of small black spots; along the centre also are two parallel slender pale lines: all these lines converge towards both the fore and hinder extremities of the abdomen. The sides are closely mottled with yellowish, and each with a longitudinal blackish stripe which at the lower margin is white. The underside is black, bordered on each side with a broadish yellow-white band and with a short broad band along the middle just in front of the genital process, which is simple, short, and not prominent.

A variety of this spider has the legs unspotted and unmarked, and the abdomen closely spotted all over with yellowish-white points or minute spots; the upperside has a longitudinal tapering white stripe along its whole length, bordered on each side with pale brownish-yellow, and along the outer side of this colour is a row, converging towards the spinners, of distinct black spots. The underside has a broad longitudinal black band, which encircles the spinners on their anterior side, and has a broadish white band along its fore half, next to the genital process.

The *male* resembles the female first above described.

The *palpi* are short; the cubital joint is somewhat angular in front, with two very long, strong, prominent,

tapering, divergent bristles; the radial joint is obtusely produced on its outer side. Palpal bulb small; palpal organs well developed and rather complex, with corneous lobes, processes, and spines.

*Hab.* GUATEMALA, Sachenmax, Sakiyac, and Cumbre de San Joaquin (*Sarg*); PANAMA, Bugaba (*Champion*).

This spider has much of the general appearance of a *Tetragnatha*, and approaches *Meta* in the form of the maxillæ; but I am supported by Count Keyserling in my view that it should be included in the genus *Epeira*.

The examples found by Mr. Sarg are females; and the one found by Mr. Champion is a male.

## **Epeira illicita**, sp. n.

*Adult female*, length 3 to 4½ lines.

The *cephalothorax* is of ordinary form, of a yellow-brown colour, clothed with whitish hairs and pubescence, and marked with a somewhat three-pronged (or bird's-foot) dark brown marking, the three toes of the foot directed forwards, the fourth backwards.

The *eyes* are in the usual three groups; the four representing the central group form very nearly a square, those of the hinder pair (which are the largest of the eight) forming a line slightly shorter than the rest, and separated from each other by less than a diameter's interval; those of each lateral pair (which are contiguous to each other and seated obliquely on a small tubercle) are placed at the extreme outside of the caput, and widely separated from the central group. The fore centrals are on a slight prominence, and about half a diameter's interval from the lower margin of the clypeus.

The *legs* are tolerably long and strong, of a yellow-brown colour, paler towards the extremities, broadly annulated (one annulus at the fore extremity of each joint) with deep brown. They are clothed with short grey hairs, and thinly furnished with, not very long nor strong, blackish spines, each of which appears to have a central yellowish annulus. Their relative length is apparently 1, 4, 2, 3, those of the third pair being no more than half the length of the fourth, if so much.

The *palpi* and *falces*, which present no unusual features, are similar in colour to the legs.

The *sternum* is oval, sharp-pointed behind, hollow-truncate before, and of a deep yellowish bistre-brown colour.

The *maxillæ* and *labium* are of a similar hue, broadly bordered with yellow; the labium is of a somewhat curviangular form at its apex.

The *abdomen* is large, of an elongate, somewhat subcylindrical form, obtusely pointed both before and behind, where it projects considerably over the spinners in a somewhat subcaudiform shape; it is of a dull whitish colour, marked on the upperside throughout its length with three long, rather narrow, brown stripes or bands, of which the central is the darkest and most conspicuous; it tapers to a point at each end, and is bordered on each side with a somewhat wavy white streak, which separates it from the lateral brown stripes; a still more wavy white streak or line divides these latter from the irregular brown markings and lines on the sides of the abdomen. Near the middle of the upperside are four impressed blackish dots, forming nearly a square. A broad central longitudinal deep black-brown band runs from end to end of the underside. The spinners are short, compact, and of a yellow-brown colour. The genital process is prominent and characteristic, its main limb being tapering, sharp-pointed, and reversed, *i. e.* pointing towards the sternum.

*Hab.* GUATEMALA, between Dolores and Chapallal, Yzabal (*Sarg*).

Examples of the female only of this very distinct species were found by Mr. Sarg.

## **Epeira intercisa,** sp. n.

*Adult male*, length 2 lines.

*Cephalothorax* rather elongate, oval. Caput well drawn out in front, where it is rather narrow; sides converging forwards. Colour yellow, with a marginal diffused border to the thorax and a narrow central longitudinal tapering stripe of blackish hue running back from the hind central eyes.

The *eyes* are of moderate size and of a pearly colour, seated on black spots. The three normal groups are rather close together, so that the anterior eyes form a curved line whose four eyes are not far off equidistant from each other. The four centrals form a square whose posterior side is much the shortest; its eyes are separated by nearly a diameter's interval, while those of the anterior side are divided by more than two diameters. Each fore central eye is distinctly nearer to the fore lateral on its side than to the other fore central eye. The fore centrals are seated on a strong prominence, and each is placed on a somewhat diverging tubercle at one of its anterior corners.

The *falces* are moderately long, not very strong, directed backwards, and of a pale yellow colour.

The *legs* are long, moderately strong, 1, 2, 4, 3; those of the first and second pairs are very long. They are all similar to the falces in colour, pale yellow, and furnished with hairs and long spines.

The *palpi* are short, similar in colour to the legs; the cubital joint has two very long, strong, tapering, prominent spine-like bristles in front. The palpal bulb is of moderate size; the palpal organs are not very prominent, highly developed, nor complex.

The *maxillæ*, *labium*, and *sternum* are yellow, the latter rather narrow, with a narrow blackish margin.

The *abdomen* is of a rather narrow-oval form, pointed in front, obtuse behind, and projects greatly over the thorax; the greater part of its upperside, almost to the lateral margins, is occupied by a large, oblong, dark sooty-brown area laterally margined by several largish, almost connected, black, elongate, spots, forming a somewhat broken angular stripe on each side, with a narrow whitish line on its inner edge; two other stronger but somewhat broken whitish parallel longitudinal lines bisect the upperside of the abdomen, leaving a central and lateral sooty-brown stripe on each side; from each somewhat angular exterior prominence of the marginal black stripe above mentioned a row of black spots drops vertically over the sides into an irregular thinly marked longitudinal band of blackish markings, the ground-colour of the sides being dull yellowish spotted thickly with whitish-testaceous spots. The underside has a broad longitudinal black band, with a diffused white blotch in the middle.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is allied to *E. tetragnathoides*.

## **Epeira laticeps,** sp. n.

*Adult female*, length very nearly 4 lines.

*Cephalothorax* of a somewhat oblong form. Caput large, very broad, roundly raised above and on the sides; sides rather divergent forwards, then parallel or convergent. Colour orange-yellow-brown. Clothed with greyish hairs. In one example the lateral margins, a large portion of the caput just behind the eyes, and a central bar from the hind central pair of eyes to the thoracic indentation, where it ends in a bifid form, are deep brown tinged with reddish.

The *eyes* are small, in the ordinary three groups, widely separated from each other. The four central eyes form a square whose posterior side is considerably the shortest, the eyes composing this side being less than a diameter's distance from each other; the anterior pair appear to be the largest, and are separated from each other by a diameter's interval. The eyes of each lateral pair are contiguous to each other, and placed obliquely. The height of the clypeus is almost equal to the diameter of one of the fore central eyes.

The *falces* are very strong, long, and very prominent at their base in front; they are similar in colour to the cephalothorax, and (in the variety above described) are strongly marked and suffused with deep brown.

The *legs* are rather short, tolerably strong, of a reddish-orange-yellow colour, furnished with hairs and spines; the latter most numerous on the tibiæ of the first and second pairs.

The *maxillæ* and *labium* are reddish-orange-brown tipped with a paler hue. *Sternum* browner.

The *palpi* are like the legs in colour and armature, the spiny part consisting more of strong bristles than spines.

The *abdomen* is oblong-cylindric, well rounded at its posterior extremity, which projects rather over the spinners. The sides and upperside are of a blackish hue, with an oblique whitish stripe towards each lateral margin converging towards the spinners, which, however, it does not reach; from the hinder half of this stripe, on each side, several whitish stripes fall vertically over the sides, and along the middle of the area included between the two lateral stripes is a white longitudinal somewhat dagger-shaped tapering band, bisected longitudinally by a strong black line or stripe; on the middle of the upperside are six or eight small rust-red spots in two longitudinal lines or three or four pairs. The underside is yellowish or brownish-yellow, with a large blackish central patch. Spinners short, compact, and of a brownish-orange colour. The genital process is large, deep blackish-red-brown, and prominent; the epigyne is short, broad, somewhat bluntish subtriangular at its extremity, and transversely rugulose (in one example this portion lies parallel to the surface of the abdomen, in the others it is only slightly directed backwards).

*Hab.* PANAMA, Bugaba (*Champion*).

A very handsome and distinct species.

## **Epeira cylindrica,** sp. n.

*Adult female*, length 3 to 4 lines; *adult male*, slightly over $2\frac{1}{2}$ lines.

♀. *Cephalothorax* longer than broad. Caput nearly as broad as the thorax; sides almost parallel; occiput rather raised and well rounded, and sloping forwards to the ocular area; height of the clypeus equal to the diameter of one of the fore central eyes. The colour is a brightish orange-brown, with a submarginal border, which crosses over behind the lateral eyes and meets the central group, and also a longitudinal central stripe and two oblique ones (along the junction of the caput and thorax), of a dark red-brown; these markings are obsolete in some examples. The cephalothorax is covered thinly with fine whitish hairs.

The *eyes* are in the ordinary three groups and seated on tubercular prominences. The hind central eyes are separated from each other by no more than half an eye's diameter, those of the fore central pair (which are largest of the eight) by a diameter's interval. The four central eyes form a square whose posterior side is considerably the shortest. The eyes of each lateral pair are very small, contiguous, and somewhat obliquely placed.

The *legs* are rather strong, not very long, 1, 2, 4, 3, of the same colour as the cephalothorax, clouded in parts, or, rather, broadly but indistinctly annulated with darker reddish-brown, and this is generally only visible on those of the third and fourth pairs. The legs are armed with spines, most numerous and strongest beneath the tibiæ of the first and second pairs.

*Falces* strong, moderately long, prominent at their base in front, straight, vertical, and varying in colour from orange to dark orange-red-brown.

*Maxillæ* dark reddish-yellow-brown, and pale whitish at the extremity. *Labium* darker in colour than the maxillæ. *Sternum* dark yellow-brown.

*Abdomen* cylindrical, and produced at its hinder extremity rather considerably over the spinners; the fore extremity projecting over the thorax. It is of a dull greyish-drab in the spirit-preserved specimens (but Mr. Sarg says in his notes that it is of "a peculiar shade of purplish-yellow" in the living spider), striped longitudinally on the upperside with four white stripes, and marked with six small impressed red-brown spots in three pairs, or two longitudinal lines. A broad longitudinal black band, strongly bent towards its posterior extremity, occupies each side; there are also some black markings at each end of the upperside, and a broad transverse black band across the underside just behind the genital process, which is oval, convex, of a deep reddish-bistre-brown colour, slightly rugulose transversely, and with a narrow transverse aperture behind. Spinners short, strong, compact, and of a brownish-orange-yellow colour.

The *male* resembles the female in general characters and colours as well as markings in the immature state, but in the adult the abdomen is marked on the upperside with three longitudinal blackish lines or slender stripes, the intervening space being of a whitish drab. According to Mr. Sarg, "the abdomen is yellow-ochre, with three longitudinal sharp brown lines." The dark submarginal border and other markings of the cephalothorax are more richly coloured and more conspicuous than in the female. The spines on the legs are also stronger, and there is one stronger than the rest at the fore extemity rather on the inner side of the tibiæ of the second pair, with another similar one a little way behind it and beneath the joint.

The first two pairs of legs are considerably the strongest, and the second pair is much longer than the fourth. The eyes of the hind central pair are almost contiguous to each other.

The *palpi* are short; the palpal bulb is large; the palpal organs are prominent, tolerably complex, with spines and corneous processes; and the digital joint has a strong, deep, black-bistre-brown, curved, tapering, but obtusely pointed, corneous process at its base on the outer side.

*Hab.* GUATEMALA, Saviexpúr, between Dolores and Chapallal, Cahabon (*Sarg*).

Females and immature males, and one adult male, were found by Mr. Sarg near Dolores and at Saviexpúr; females also at Cahabon. Count Keyserling thinks this species should be placed in the genus *Nephila*; but after careful consideration it seems to me not to differ generically from *Epeira*, and to lack the chief characteristics of *Nephila*.

### **Epeira passiva,** sp. n.

*Adult female*, length 2 lines.

The *cephalothorax* has the thoracic portion much elevated, with a long slope to the eyes and a very abrupt posterior slope; its colour, as also that of the falces, legs, palpi, sternum, and labium, is a bright orange-yellow, the tibiæ and tarsi in some examples being slightly clouded with dusky. The cephalothorax is bisected by a dusky blackish longitudinal line, which is strongest near the hind central eyes.

The *eyes* are of moderate size, in three well, but not very widely, separated groups, forming a narrow transverse-oval figure, removed from the lower margin of the clypeus by scarcely a fore central eye's diameter. The four central eyes form a square, the hinder pair being slightly the largest; the eyes of each lateral pair are very small, contiguous to each other, and seated a little obliquely on a small tubercle.

The *legs* are rather short, tolerably strong, tapering, and armed, chiefly on the tibiæ and metatarsi, with longish strong black spines. The relative length of the legs is apparently 1, 2, 4, 3, but the difference is not very great.

The *sternum* in some examples has a dusky blackish border, and the *maxillæ* and *labium* are sometimes suffused with the same hue.

The *abdomen* is of a rather elongate-oval form, somewhat bluntly pointed at its fore extremity, which projects greatly over the thorax. It is of a yellowish-brown colour above and on the sides, and of a paler hue underneath; the upperside has a long, somewhat oblong-shaped longitudinal black marking, reaching from near its fore extremity (where it is somewhat pointed) to a little above the spinners, where it is truncated. Near the fore extremity of this black marking are two rather long, slightly curved, oblique, divergent or opposed, white stripes, and behind this, towards the spinners, are one or two transverse pairs of white spots. In one or two examples the black marking is bordered with white spots or broken patches; in some others the black marking is of a dark yellow-brown, bordered and crossed transversely with black. The sides of the abdomen are marked more or less conspicuously with irregular longitudinal white and black markings; and on the underside, on each side near the spinners, is a small bright white spot. The spinners are short, compact, black, and immediately above them is a series of transverse folds of the epidermis, decreasing in size to almost a point; close above them the last three of these folds look like a sort of segmented flap or continuation of the abdominal cuticle. The genital process is very small and inconspicuous.

*Hab.* GUATEMALA, Cahabon, San Juan Chamelco, Tactic, on the upper road to Chichochoc, Laguna de los Coheteros, Coban (*Sarg*).

Specimens in Mr. Sarg's Guatemalan collection are labelled as from Cahabon (spinning a circular web on bushes), Coban, San Juan Chamelco, and other localities above mentioned. A note of Mr. Sarg's says: "The cephalothorax burnt-sienna-red, legs the same; abdomen burnt-sienna with a large patch of sepia down the centre, the markings on this Roman ochre;" this shows how little the colour of specimens preserved in spirit can be depended upon. All the examples received are females.

## **Epeira bimaculata,** sp. n.

*Adult female*, length 3 lines; *adult male*, 1 line.

The whole of the fore part, including the cephalothorax, falces, sternum, maxillæ, labium, legs, and palpi, is yellow tinged with orange; in the female the tibiæ of the fourth pair of legs are broadly annulated with dark orange. A dusky blackish line bisects the cephalothorax longitudinally, and is least marked in the male. The legs are moderately strong, and armed with longish black spines; their relative length is 4, 1, 2, 3, that of 4, 1, and 2 not differing much. The thoracic portion of the cephalothorax is considerably raised or gibbous, and the hinder slope, therefore, correspondingly steep.

The *eyes* are in the usual three groups, well separated, but not greatly so. The four central eyes form a trapezoid, whose longitudinal is greater than its transverse diameter; the hinder pair of the trapezoid are the largest, edged with black, and almost contiguous to each other; the anterior pair are close to the lower margin of the clypeus, seated on a slight prominence, and separated from each other by about half a diameter; those of each lateral pair are smallest, contiguous to each other, and seated obliquely on a slight tubercle.

The *abdomen* of the female is oblong-oval, obtusely pointed in front, and projecting greatly over the base of the cephalothorax; it is of a dull drab-yellow or light yellow-brown colour, marked on the upperside and sides with numerous small white cretaceous-looking spots; on the upperside towards the spinners are two longish oblong parallel dark brown spots or blotches, one on each side of the median line, broadly margined on their outer side by the white spots above mentioned, and both in front of and behind these brown blotches are faint indications of other brown spots along the middle of the abdomen, but forming no traceable pattern. On each side of and behind the two blotches the abdomen is strongly suffused with orange. The spinners are short, compact, of a dull orange-brown colour, and on each side of them the abdomen has a conspicuous white spot. The genital process is conspicuous, rather prominent, of a brownish-orange colour, edged with deep black-chestnut.

*Hab.* GUATEMALA, between Petet and Chicoyoito, Cahabon, Quirigua (*Sarg*); PANAMA, Veragua (*Boucard*).

This spider is nearly allied to *E. passiva*, but may easily be distinguished by the size and disposition of the four central eyes, as well as by the form and structure of the genital process.

The male resembles the female in colours and markings, though the large brown blotches on the abdomen of the latter sex are, in the male, each broken up into two or three smaller ones, and are almost jet-black, being thus very conspicuous. The palpi are short, exhibiting no very marked peculiarity. The cubital joint is furnished with a long, prominent, tapering bristle. The palpal bulb is rather small; the palpal organs are well developed, not very complex, and have two tolerably conspicuous, slightly curved, dark spines—one at their fore extremity, and one on the outer side. In this sex the first and second pairs of legs are longer than the fourth.

From Mr. Sarg's notes it seems that preservation in spirit has rather destroyed the markings of, at any rate, one of the females. He says: "The cephalothorax is pale reddish-brown, covered with whitish hairs; legs yellow-ochre, the 3rd joint [? tibiæ] burnt sienna banded with dark sepia; abdomen pale yellow-brown, with a brown band and numerous brown marks down the centre, and yellow-ochre beneath, with a broad black band to the spinners." He also remarks that the cocoon is complex, consisting of five connected angular sacs, each covered with knob-like processes.

In the form of the cephalothorax and some other characters, this spider and *E. passiva* (p. 20) are closely allied to the two species of *Mangora* (*suprà*, p. 14, Tab. III. figg. 5, 6, 7), with which I should have coupled them had it not been for the strong opinion to the contrary of Count Keyserling.

### **Epeira graphica,** sp. n.

*Adult male*, length rather over $1\frac{1}{2}$ line.

*Cephalothorax* of ordinary form; caput moderately broad, prominent at the middle in front, the sides nearly parallel; the colour is yellow, with a large wedge-shaped deep brown area, including the upper part of the caput, the ocular area, and reaching to the thoracic indentation, where it ends in a point.

The *eyes* are in the usual three groups; those of the central group are rather large and prominent, though apparently not differing much in size, but the hinder pair form a line less in length than the anterior pair, whose eyes are about half a diameter's distance from the lower margin of the clypeus.

The *falces* are moderately long, not very strong, yellow, with a black spot at the base in front towards the inner side.

The *legs* are tolerably long, moderately strong, 1, 2, 4, 3; the femora are blackish, but pale yellow at the base, the genua blackish, the rest of the legs annulated with blackish and pale yellowish, the first and second pairs tinged with brownish. They are furnished with hairs and a few not very strong spines, the latter mostly on the tibiæ of the first and second pairs.

The *palpi* are short, yellowish, the digital joint dark yellow-brown; palpal bulb of fair size; palpal organs prominent, not very complex, with a pale, curved, projecting corneous process, obtusely truncated at the end, at their extremity.

The *sternum* is of a rather narrow-oval form, yellow, with a black longitudinal central marking.

The *abdomen* is a regular oval, a little constricted across the middle (unless this is due to shrinking in spirit of wine) towards the margins of the upperside; on each side is a longitudinal, slightly indented, white streak or stripe, edged on each margin with black, most conspicuous at the fore extremity, and fining off indistinctly at the hinder parts, and within this at the anterior end there is on each side of the median line (which is occupied by a short, bright white central tapering stripe) a jet-black spot, interrupted in the middle, but continued quite to the fore edge of the abdomen; from the point of the central white stripe towards the hinder extremity are some small ocellated whitish-yellow spots, followed by some narrow obscure transverse blackish-brown bars in a longitudinal series; the ground-colour of the upperside of the abdomen is brownish, the underside being black.

*Hab.* PANAMA, Bugaba (*Champion*).

### **Epeira gregalis,** sp. n.

*Adult female*, length from $3\frac{1}{2}$–$4\frac{1}{2}$ lines.

*Cephalothorax* rather oblong-oval. Caput broad and well rounded above, the sides very nearly parallel. Colour yellow-brown, the caput entirely rich dark yellow-brown and glossy, and the thorax margined narrowly with brown, and some converging lines of the same colour on the sides following the normal grooves.

The *eyes* are small and in the usual three groups. The four central eyes form a square, whose posterior side is much the shortest, and its eyes are almost contiguous to each other, those of the anterior side being on strongish tubercles.

The *falces* are rather long, powerful, and very prominent and rounded in front towards their base. They are directed rather backwards, and are very glossy, and similar in colour to the caput.

The *legs* are short, strong, 1, 2, 4, 3. They are of a yellowish-brown colour, paler on the femora, furnished with hairs and spines; the latter not very conspicuous.

The *palpi* are similar to the legs in colour and armature, the humeral and cubital joints the palest, like the femora of the legs.

The *maxillæ*, *labium*, and *sternum* are dark yellow-brown, the two former tipped with yellowish-white.

The *abdomen* is of an exact oval. Its colour is dull yellowish-white, covered, but not densely, with hairs; a

strong zigzag or dentated longitudinal black stripe on each side converges towards, but does not reach, the spinners; these stripes are strongest at their anterior extremity, where they also converge to a point just at the fore margin of the abdomen, and enclose a strongly and distinctly dentated band, broadest at the shoulders, and thence gradually narrowing backwards; the band is bisected longitudinally by a more or less continuous black stripe, strongest and most distinct at the anterior extremity, and it also contains three pairs of distinct dark reddish-brown spots in two longitudinal parallel lines of three each. The sides have an indistinct longitudinal stripe of fine blackish lines, and numerous rows of black spots running parallel to each other, and a little obliquely backwards from the dentated bars on the upperside. The underside is indistinctly marked with blackish. The genital process is reddish-yellow-brown, prominent, and of a very characteristic form; its anterior portion is broad, obtuse, and bifid, or notched, and its posterior side has a small blunt prominence in the middle, the lateral extremities are also split.

*Hab.* PANAMA, Veragua (*Boucard*).

This spider bears a considerable resemblance to *Zilla atrica*, Koch.

## **Epeira incerta**, sp. n.

*Adult female*, length $3\frac{1}{2}$ lines.

*Cephalothorax* oval, of ordinary form. Sides of caput converging forwards, the caput itself rather narrow in front. Colour dull pale yellow-brown, with an indistinct central longitudinal darker stripe from the hind central pair of eyes backwards.

The *eyes* are small and in the usual three groups, which are, however, not so widely separated as in many other species, owing to the caput there being narrower. The four central eyes form a square, whose posterior side is the shortest, and the eyes composing that side are almost contiguous to each other; those of the anterior side are more than a diameter's distance from each other, and less than that interval from the lower margin of the clypeus. Those of each lateral pair are seated a little obliquely on a slight tubercle, and not quite contiguous to each other.

The *falces* are short, strong, vertical, and very prominent near their base in front; their colour is yellow-brown, paler at the extremities.

The *legs* are moderate in length and strength, 1, 2, 4, 3. They are of a brownish-yellow colour, the femora of the first three pairs strongly suffused with dark brown, the rest of the joints annulated with deep black-brown. They are furnished with rather long greyish hairs and spines.

The *palpi* are similar in colour to the legs, and furnished with hairs and slender bristles.

The *maxillæ*, *labium*, and *sternum* are yellow-brown, the two former paler at the extremities.

The *abdomen* is short-oval, nearly as broad as long, and very convex above. It is of a pale yellow-brown colour, with a yellowish furcate marking in the median line of the anterior extremity, the forked part directed backwards; on the hinder half is an oblong darker area, faintly traced by darker lines, and the sides are marked by a longitudinal irregular dark blackish marking. The underside has a broad central, longitudinal yellowish band running backwards from the genital process, but not reaching the spinners; the inferior spinners are black-brown, the rest paler brown. The genital process is characteristic, but not very large, it is prominent, dark yellow-brown, with a very small pale sinuously bent prominent epigyne.

It is probable that other specimens of this spider would be found to have a much more decided pattern and colouring than the only example examined, which, however, sufficiently shows the distinctness of the species by the above-mentioned structure of the process and epigyne.

*Hab.* COSTA RICA (*Rogers*).

## **Epeira fragilis**, sp. n.

*Adult female*, length a little over $1\frac{1}{2}$ line.

*Cephalothorax* short; thorax circular, the sides of the caput, which is very short, converging forwards. The whole of the anterior portion of the spider is pale yellow, with a white blotch at the occiput, immediately in front of the thoracic indentation.

The *eyes* are very small and in the usual three groups. The four centrals form a square, whose anterior side is very slightly the shortest, and its eyes largest, seated on black spots, and very close to the lower margin of the clypeus. The laterals are contiguous, seated on a tubercle, and parallel to the lateral margin of the caput.

The *falces* are short, moderately strong, vertical, and prominent at their base in front.

The *legs* are of moderate length, not very strong, 1, 4, 2, 3, or 1, 2, 4, 3, furnished with hairs and a few not very strong spines. The extremities of the metatarsi and tarsi are tinged with rusty-reddish.

The *abdomen* is large, nearly globular, but distinctly broader than long. The upperside and sides are of a uniform cretaceous-white. The underside tinged with dull yellowish. The genital process is prominent, yellow-brown and dark brown, and of a very characteristic form, presenting a somewhat cruciform shape, with a small epigyne directed forwards and upwards.

The *maxillæ* are broad, and the sides appear to be nearly straight, slightly divergent, and angular at their extremity on the outer side, and the *labium* is short and of an oval (transverse) form. The form of these parts, especially of the *maxillæ*, departs so much from that of the generic type that it is questionable whether *E. fragilis* ought not to form a new genus more nearly allied to *Meta*.

*Hab.* PANAMA, Bugaba (*Champion*).

This little spider bears a very *Theridion*-like appearance.

## **Epeira helvola,** sp. n.

*Adult female*, length $2\frac{2}{3}$ lines; *adult male*, $2\frac{1}{3}$ lines.

♀. *Cephalothorax* nearly circular at the thorax, the sides of the caput converging forwards. It is of a yellow-brown colour, the oblique indentations between the caput and thorax broadly marked with a darker hue, the caput (and perhaps the rest) clothed with grey hairs, and with a pale patch at the occiput.

The *eyes* are on black spots and in the usual three groups. Those forming the central group describe a square, whose anterior side is slightly the shortest, and the eyes of this side are smaller than those of the posterior side; the height of the clypeus is nearly equal to about a third of the facial space. The eyes of each lateral pair are seated, a little obliquely, on a tubercle.

The *falces* are vertical, and moderate in length and strength, of a yellow-brown colour, a little clouded in front with a darker hue.

The *legs* are short, moderately strong, 1, 4, 2, 3, of a dull orange-brown colour, indistinctly annulated with a darker hue, and armed with hairs and spines.

The *maxillæ* and *labium* are dull yellowish, and the *sternum* is yellow-brown, marked with whitish converging lines from the insertions of some of the legs to the middle.

The *abdomen* is oval, broadest in front; from each shoulder a blackish dentated line, margined outside with white, runs backwards, the two converging towards the spinners, but stopping short of them; the space included by these lines is of a dark brown or blackish colour finely mottled with paler points, and has a diamond-shaped figure formed by white spots at the centre of its fore part, followed backwards by several other white spots in a longitudinal row down the middle. The sides are densely marked with small white points, and have some irregular blackish markings. The underside, including the spinners, is black, mottled down the middle of the anterior portion with whitish points, and with a short curved white band ending posteriorly in a white blotch on each side of the fore part, with one or two more white spots on each side near the spinners. The genital process is strong, prominent, and characteristic; it has a very slender, sinuously curved, prominent epigyne at its fore part.

The *male* has the markings on the cephalothorax more distinct, and (as is usual in this sex) the central part of the ocular area is more prominent, and the clypeus narrower. The legs, particularly the first and second pairs, are longer and stronger, and the spiny armature more powerful. The greater portion of the femora, especially of the first and second pairs, is entirely dark yellow-brown.

The *falces* are long, rather weak, and of a dark yellow-brown colour.

The *palpi* are short; the cubital joints have a short, black, strongish, cylindrical spine or bristle in front at the fore extremity (I should have thought that these might have been long tapering bristles broken off, but for their both being exactly of the same length and not appearing to have been fractured). The

radial joints are greatly produced on the outer side. The digital joint has its hinder extremity prolonged by a strong, curved, tapering, obtusely ending process. The palpal bulb is large, and the palpal organs prominent and complex, with some strong spines and corneous processes at their extremity.

The *abdomen* is similarly marked to that of the female, but more distinctly so.

*Hab.* MEXICO, Ciudad in Durango (*Forrer*).

This spider in the abdominal pattern reminds one much of *E. umbratica*, Clk.

## Epeira solersioides, sp. n.

*Adult male*, length 2 lines.

The whole of the fore part of this spider is of a pale yellow colour, excepting part of the tibiæ of the first and second pairs of legs, which are yellowish-brown (from the appearance of the specimen, however, it had not long attained maturity, and therefore the true colours were probably not yet developed). In general form and appearance it is very like a scarce variety of the common European (and British) *E. solers*, Walck., but may be distinguished by differences in the structure of the palpal organs, as well as by much shorter legs and a different spiny armature, especially on the femora of the first and second pairs.

The *eyes* differ slightly in position from those of *E. solers*, the fore central pair forming a rather longer line in proportion to that of the hind centrals.

The *legs* of the first pair have the femora (besides a few other spines) armed in front with three longitudinal rows of spines, the outer row most numerous and regular, but not the strongest; on the femora of the second pair there is only one row, towards the outer side; the tibiæ of the second pair are rather incrassated, and armed with stronger spines.

The *palpi* are short; the cubital joint has two long, strong, tapering, prominent bristles in front. The palpal bulb is not very large, the palpal organs well developed, not very complex, with corneous lobes and processes, one of which ends on their outer side, at the extremity, with a short pointed claw-like spine.

The *abdomen* is short, broad, oval, blunt-pointed behind; its colour is brownish, closely mottled with yellowish-white cretaceous-looking spots above and on the sides. On the fore half of the upperside almost the whole area is occupied by a subtriangular white marking, the angle directed forwards, and divided into four quarters by a dark-brown cruciform figure; following the outer margin of this white area and converging towards the spinners are, on each side, several black spots, and traces of transverse brownish bars; a patch underneath, just in front of the spinners, is sparingly covered with small white spots.

*Hab.* PANAMA, Bugaba (*Champion*).

## Epeira expleta, sp. n.

*Adult female*, length $3\frac{1}{2}$ lines.

In general form and structure this spider is of the normal type. The colour of the *cephalothorax*, *falces*, *sternum*, *maxillæ*, and *labium* is deep rich black-brown, the two latter having their extremities margined with yellow. The caput and sides of the thorax are thinly clothed with greyish hairs.

The *eyes* do not differ greatly in size; they are placed on tubercles in the usual three groups; the posterior pair of the central group are much closer to each other, and so form a much shorter line than the anterior pair; the four form a square whose hinder side is the shortest.

The *legs* are moderate in length and straight, 1, 2, 4, 3; they are of a yellowish colour, annulated with deep brown, the femora being almost entirely of the latter hue, and are furnished with hairs and a few spines.

The *palpi* resemble the legs in colour.

The *abdomen* is of a short, broad, roundish-oval form, very like that of the European *E. solers*; its upperside is a dark drab-brown, completely surrounded with a broad marginal black band, the inner edge of the fore part dull yellowish, and irregular, or deeply indented all round. On the hinder half is a central broad, dentated, slightly tapering, black band, the points of the denticulations on either side being continued as

oblique lateral stripes joining in with the black marginal band. The underside is black, and the spinners dark brown. The genital process or epigyne is of characteristic form, slender, prominent, and curved.

*Hab.* GUATEMALA, Senahu in Vera Paz (*Sarg*).

A single example.

## **Epeira detrimentosa,** sp. n.

*Adult female*, length slightly over $2\frac{1}{2}$ lines; *adult male*, very slightly over 1 line.

In size, form, colours, and general appearance this spider is very like the common European *Epeira agalena*, Walck., to which it is evidently closely allied. In the female (and, indeed, in the male also) the anterior side of the quadrilateral figure formed by the four central eyes is distinctly longer in proportion to the posterior than in *E. agalena*, in which these eyes form as nearly as possible a square; and in the male of the present species the palpal bulb (*i. e.* the digital joint and palpal organs as a whole) is very much smaller than that of *E. agalena*, and the palpal organs are of quite a different structure. The only male contained in Mr. Sarg's collection may have been abnormally small, but it is not half the size of the smallest *E. agalena* I have ever come across. The genital processes in both species are remarkably similar. A pretty variety of the female has the whole of the upperside of the abdomen pale dull yellow (when alive of a pale creamy-green, *vide* Mr. Sarg's notes), with the sides and underside of a nearly uniform reddish-brown, paler in the middle, with no pattern or markings visible.

*Hab.* GUATEMALA, between Petab and Chicoyoito, Chilasco (*Sarg*), Antigua (*Stoll*).

The male was found between Petab and Chicoyoito, near the river; several females at Antigua; the variety of the female mentioned above, at Chilasco; and a female at Magdalena, near Antigua.

## **Epeira fecunda,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines: some examples are rather more, some rather less. *Adult male* rather smaller than the female, but, like her, varying somewhat in different examples.

This spider belongs to the *E. cornuta*, Clk., group. Its cephalothorax is yellow-brown, the thoracic indentations and a central longitudinal line on the caput marked with a deeper hue.

The *eyes* are in the usual three groups; those of the central group form nearly a square, whose posterior side is shorter than the anterior, its eyes being almost contiguous.

The *legs* are rather short, 1, 2, 4, 3, moderately strong, tapering, furnished with hairs and spines, and (together with the *falces*, *palpi*, *maxillæ*, *labium*, and *sternum*) of a yellow-brown colour.

The *abdomen* is of a short-oval or somewhat heart-shaped form, and projects considerably over the base of the cephalothorax. A broad central longitudinal deep blackish-brown band extends from end to end of the upperside, tapering to the spinners; this band is angulated on the lateral margins, each of the prominent points being generally marked by a small spot or blotch, and is bisected longitudinally by a more or less conspicuous white stripe, pointed in front, then enlarging, and thence tapering to a sharp point posteriorly (in most specimens, however, this stripe is almost obsolete, being much obscured with blackish and running into a black line, excepting at the fore extremity, where the white is usually conspicuous). The rest of the upperside is whitish mixed with black points, mostly arranged in oblique lines, the white predominating at the anterior extremity. The sides and underside are dark blackish-brown, sometimes tinged with yellow-brown, and in some examples two longitudinal parallel bands are visible on the underside. The genital process is characteristic, though not very large; it is of an obtuse and somewhat transverse oval form.

In the *male* the two anterior pairs of legs are longer than those of the female, and the spines on the tibiæ are

stronger. The palpi are very short, the palpal bulb not large; the cubital joint has a long, curved, tapering black bristle in front, and one less strong is on the front of the radial joint. The palpal organs are well developed, prominent, and moderately complex, several pointed processes being directed a little outwards in front.

*Hab.* GUATEMALA, generally distributed (*Sarg*).

Numerous examples (mostly females), from many localities, appear to show that this is a very abundant species in Guatemala. On one specimen Mr. Sarg notes that the abdomen is black with large blotches and markings of rose-carmine: no rose-carmine is visible on any I have examined; this hue must therefore have entirely disappeared since the immersion in spirit of wine.

## **Epeira bivariolata,** sp. n.

*Adult female*, length 3–3½ lines; *male*, immature, 3½ lines.

The whole of the anterior portion of this spider is yellow. The legs in one example of the female (and still more strongly in the immature male) have a broad red-brown annulus at the fore extremity of the femora, tibiæ, genua, and metatarsi; they are furnished with numerous short and not very strong spines, whose basal portion is black and their points pale yellowish. The relative length of the legs (which are moderately long and strong) is 1, 2, 4, 3.

The *eyes* are in the three usual groups; those of the central group form a square whose posterior side is the shortest, and the eyes of this square are about equal in size; the height of the clypeus rather exceeds the diameter of the fore centrals.

The *abdomen* is subtriangular, and blunt-pointed at the fore extremity; it is of a pale yellowish hue, covered with minute whitish cretaceous points, and furnished with pale hairs and bristles. At the hinder extremity are two circular, corneous, rather raised, shining spots or prominences, each encircled with a yellowish-white ring. The size of these spots seems to be variable, and in two examples the spots are small and jet-black, in another large and yellow-brown. On each side of these spots, following the lateral marginal line of the abdomen, and extending halfway to the fore margin, are four oblique narrow pointed oval dark dashes, also (faintly) margined with yellowish, and having a corneous appearance; in two examples these dashes are scarcely traceable. The genital process is very simple, small, not prominent, but directed backwards.

*Hab.* GUATEMALA, Chamiquin, Chiacam, Cubilguitz (*Sarg*).

In the immature male the two shining black spots on the abdomen are larger and more prominent, the yellowish annuli encircling them showing out more vividly by the surrounding surface being black, the four oblique black, narrow, pointed, oval spots being also much larger, more conspicuous, and distinctly margined with white, and just on the inner side of each of the two anterior ones is another much smaller one of the same kind; the upper surface of the abdomen in this example is of a whitish-yellow, and of a somewhat coriaceous appearance, without hairs or bristles (perhaps rubbed off?). Of this example Mr. Sarg says:—"Thorax, legs, and lower part of abdomen orange, verging on light burnt-sienna; on the abdomen, sharply outlined, bright green, metallic when caught, bordered anteriorly by a narrow white line, posteriorly by ten black ocellæ with clear white margins." This, again, shows how

little the preserved specimens can be relied upon in respect of colouring, that portion which in life was shining green having changed to a dull whitish-yellow.

### **Epeira sargi,** sp. n.

*Adult female*, length $3\frac{3}{4}$ lines.

*Cephalothorax* brownish-yellow, the caput and parts of the thorax thickly clothed with white hairs, a large patch on each side of the thoracic indentation dark brown.

*Legs* spinous, yellow, distinctly annulated with black, the yellow portions thickly clothed with white hairs.

*Sternum* black, with an irregular central longitudinal yellow stripe.

*Abdomen* subtriangular, rather roundish, pointed in front, strongly and subconically prominent at each shoulder. Its colour is bright yellow above, with five large irregular black markings, two in front between and leading from the inner side of the summit of each conical prominence, two about the middle, and one forming a vertex behind of a **Y**-shape; the anterior as well as the posterior black markings are connected with the black underside, which is strongly and irregularly emarginate all round, where it joins the yellow of the upper part. On the middle of the underside are four yellow spots (of which the two hinder ones are the largest) forming very nearly a square. The genital process is not very strong nor conspicuous; the epigyne connected with it is pale coloured, slender, tapering, and of moderate length, nearly straight, directed backwards, and slightly bent at the end.

*Hab.* GUATEMALA, Chilasco (*Sarg*).

A fine, very distinct, and handsome species.

### **Epeira habilis,** sp. n.

*Adult female*, length $2\frac{1}{2}$ to $3\frac{1}{4}$ lines.

This spider belongs to the *E. diadematа*, Clk., group, and its general form needs no particularization.

The *cephalothorax* is of a deep brown colour, with a large, somewhat diffused patch of a pale dull yellowish hue on each side of the median line of the thorax.

The *legs* are yellow, the tibiæ rather indistinctly annulated with brown, the femoral joints as well as a portion of the femora more or less strongly suffused with the same hue. The strongest and deepest coloured annulus is at the hinder extremity of the tibiæ of the fourth pair; these latter are furnished with hairs and a few inconspicuous spines.

The *eyes* are in the usual three groups, and seated on tubercles; those of the central group form a square whose posterior side is shorter than the rest. They do not differ much in size, but those of each of the lateral groups, which appear to be the smallest, are contiguous to each other and are placed obliquely. The clypeus retreats a little, and its height is much less than half that of the facial space.

The *falces* are moderate in length, but powerful; they are similar in colour to the cephalothorax, and perpendicular to the caput. The *maxillæ*, *labium*, and *sternum* are like the falces in colour, the two former margined with pale whitish-yellow.

The *palpi* are similar in colour to the legs.

The *abdomen*, which is large, oval, broad, and projects considerably over the thorax, is of a yellowish-white colour, and somewhat cretaceous in appearance. The whole of the upperside is margined with a broad deep brown band very irregularly edged on the inner side, and a conspicuous longitudinal band of the same hue, and rather tapering form, occupies the middle of the hinder half of the upperside, its hinder extremity coalescing with the marginal band before noted; the exterior margins of the central band are deeply but obtusely indented, and are bordered with a white, or nearly white, line, and a little way in front of the band is a transverse row of four black spots, the two middle ones widest apart and representing two of the normal indentations or points of internal muscular attachment, two others of the same kind, but smaller and much closer together, being placed rather more than halfway between them and the marginal band at the fore extremity of the abdomen. The underside of the abdomen is similar to the marginal band in colour, and just behind the genital process are two pale yellowish blotches placed transversely, and of a roundish, or, sometimes, somewhat diamond form. The genital process is of a pale hue, and very

much resembles that of *E. diadematata* in its form. In one or two examples, the exterior one on each side of the black spots above noted forms the last of a lateral series of four or five conspicuous deep brown spots, each margined with white, and the series converging towards the spinners. In the typical example these spots are apparently merged in the central band.

*Hab.* GUATEMALA, Chilasco Mts., Coban, Magdalena near Antigua (*Sarg*).

Mr. Sarg obtained specimens of this species from flowers.

## Epeira ocellata, sp. n.

*Immature female*, length 2 lines.

Although not adult this spider presents so very marked and characteristic a pattern on the abdomen that I am induced to describe it as a distinct species. It is of the ordinary form belonging to the *E. diadematata* group. The whole of the fore part is yellow; the legs annulated, but not very distinctly, with dark yellow-brown, the metatarsi and tarsi only tinged with it at their fore extremities. The legs are tolerably strong, but not very long, 1, 2, 4, 3. Spines few and inconspicuous.

*Abdomen* subtriangular, of a dull drab hue; from near the fore part on each side two rows of four or five very distinctly defined ocellated spots converge towards the spinners; these spots are oval, black, and encircled with a pale yellowish border, outside which a black ground runs through the row; from each of these spots a row of others, decreasing gradually in size, runs obliquely downwards over the side of the abdomen, those spots also being more or less distinctly ocellated. The large triangular space between the two rows on the upperside is occupied by whitish-yellow curved or oblique markings, forming, however, no very definite pattern. Spinners short, compact, yellow-brown.

The *eyes* are small, subequal, and in the usual three groups; those of the central group form a square whose posterior side is shorter than the other three; the eyes of the posterior side are the largest, and are separated by less than a diameter's interval.

*Hab.* GUATEMALA, Cahabon (*Sarg*).

## Epeira aculifera, sp. n.

*Adult female*, length 3½ lines.

This spider belongs to the *E. cornuta*, Clk., group.

The *cephalothorax* is yellowish-brown, with a rather darker central longitudinal broken line, and a deep brown oblique dash on each side along the grooves, where the caput and thorax unite, and it is clothed with whitish hairs.

The *eyes* are in the usual three groups; those of the central group are on a prominence, and form a square, whose posterior side is slightly shortest, the anterior pair being an eye's diameter from the lower margin of the clypeus, and the posterior pair the largest.

The *falces* are dark yellow-brown, moderately powerful, and vertical.

The *legs* are short, moderately strong, clothed with grey and other hairs, armed with spines, some black, others pale whitish. Their colour is yellow to yellow-brown, irregularly annulated with dark brown; relative length 1, 4, 2, 3.

The *palpi* are similar to the legs in colour and armature.

The *maxillæ* and *labium* are blackish-brown tipped with whitish, and the *sternum* is of the same colour, bisected longitudinally by a broad but ill-defined pale band, and clothed with grey hairs.

The *abdomen* is of a subtriangular form, rounded in front, obtuse behind, and has the upperside of a greenish-white hue, the larger portion being occupied by a broad yellow-brown band which tapers from the fore margin to the spinners, and has its sides defined by a sharply dentated black-brown line on each side. Within this area is a longitudinal dagger-shaped whitish-yellow marking, double-crossed at the anterior extremity. The sides appear to be marked with some irregular oblique brown stripes. The underside has its central portion blackish, and marked with four whitish spots forming a square. Spinners normal, and of a dark brown hue. The abdomen is clothed with greyish hairs, and has a few prominent dark and pale bristles on the upperside. The genital process is characteristic and prominent; from its fore

side a slender epigyne bends a little over it, and has its very fine thorn-like extremity directed almost perpendicularly downwards. This portion of its structure will serve to distinguish *E. aculifera* easily from all its near congeners known to me.

*Hab.* GUATEMALA, southern slope of the Volcan de Fuego (*Sarg*).

## **Epeira mobilis,** sp. n.

*Adult female*, length 2 lines.

In size, form, colours, and general characters of the markings this spider closely resembles the common and well-known European and British *Epeira acalypha*, Walck. It may, however, be easily distinguished by the following characters:—The cephalothorax has no marginal black border (I have examined numerous English examples and not found one yet in which this is absent). The spines on the legs are much longer and stronger. The parallel oblique black stripes on the sides of the abdomen, so constant and regular in the European form, are quite irregular in *E. mobilis*. The underside of the abdomen has also only one white spot, just in front of the genital process, while in the European spider the underside of the abdomen has its lateral margins also marked with a strong broken white stripe or series of spots. The genital process also in the two forms differs slightly but distinctly. The pattern on the upperside of the abdomen in *E. mobilis* consists of an undivided central longitudinal black stripe flanked on each side of it, over the hinder half, with another parallel to the central stripe (in most of the European forms the central stripe becomes broken and irregular over its posterior half); this character, however, may perhaps be found to vary in *E. mobilis* on examination of a series of specimens.

*Hab.* MEXICO, Ciudad in Durango (*Forrer*); GUATEMALA, Motagua valley, Chicoyoito (*Sarg*).

An example found at Chicoyoito on bushes and another from the Motagua valley were contained in Mr. Sarg's collection. It has also been found in Mexico by Mr. Forrer.

## **Epeira lineatipes,** sp. n.

*Adult female*, length 1½ line; *adult male*, 1½ line.

The whole of the fore part of this small spider is pale yellow, with two converging black lines on the cephalothorax indicating the indentations between the caput and thorax, and meeting at the thoracic junction, and longitudinal black lines in front of the first and second pairs of legs; three lines on the femora, one on the femoral and tibial joints. The sternum also has some dusky marginal spots opposite the insertion of the legs, and there are two or three short longitudinal black lines on the basal portion of the falces.

The *eyes* are in the usual three groups, somewhat closely placed together; the four centrals form a square, and the posterior pair are light amber-coloured, and larger than the anterior pair, which are placed almost close on the lower margin of the clypeus.

The *legs* are of tolerable length and strength, 1, 4, 2, 3, yellow, with a slight suffusion of reddish-brown at the anterior extremities of the tibiæ. They are furnished with hairs and a very few fine spines.

The *abdomen* is of a short-oval form (or subtriangular), being broadest before and pointed behind, and dull colour, closely mottled with white; a tolerably regular white dagger-shaped marking runs along the middle of the upperside; and on each side a longitudinal row of a few black spots converges to the spinners; a few irregular white markings are on the underside. The genital process is characteristic, not very prominent, but with a small prominent recurved epigyne.

In the *male* the ocular area is more prominent, and the black lines on the caput and legs more complete and conspicuous. The spines on the legs are also numerous, long, and rather strong, especially on the tibiæ of the second pair.

The *palpi* are short, the cubital joint has two strong prominent tapering black bristles in front, the radial joint is strongly and angularly prominent on the outer side, and the palpal bulb is of moderate size. The palpal organs are prominent, well developed, and furnished with lobes, corneous points, and spines.

The upperside of the *abdomen* of the male has a strongly, though rather irregularly indented or angular black line on each side converging to the spinners, giving somewhat the appearance of a longitudinal series of triangular marks, decreasing in size as they approach the spinners. The fore extremity of the abdomen is transversely spotted with lines of small black spots, and the sides are marked with slightly oblique black lines and other similar markings.

*Hab.* GUATEMALA, road between Retalhuleu and Mazatenango, Santa Ana (*Sarg*), Guatemala city (*Champion*).

### **Epeira rufipes,** sp. n.

*Adult female*, length $4\frac{1}{3}$ lines.

*Cephalothorax* of ordinary form, the sides of the caput converging forwards, and black, continued in a tapering band to the hinder part of the thorax, the rest of the thorax orange-red.

The *eyes* are very small; the four centrals form a rectangle, rather longer than broad, the anterior pair dark coloured, edged with yellow, larger than the posterior pair, and separated from the lower margin of the clypeus by a diameter's interval. Laterals seated slightly obliquely on a small but prominent and distinct tubercle, and nearly contiguous to each other.

The *falces* are short, powerful, roundly prominent in front, and similar in colour to the cephalothorax.

The *legs* are short, strong, orange-red, clothed with hairs, and with a very few slender spines, 1, 4, 2, 3.

The *maxillæ*, *labium*, and *sternum* are similar to the legs in colour, the two former tipped with pale whitish.

The *abdomen* is large, subtriangular, almost as broad in front as long, and projects greatly over the thorax; it is of a whitish hue above and on the sides, with traces of darker markings, but none distinct, nor any traceable pattern (very probably these have been obliterated in course of preservation). The underside is blackish, with three not very distinct white blotches, one in the median line just in front of the genital aperture, and another on each side just behind the spinners, which last are short, compact, and black. The genital process is small and inconspicuous, though characteristic; the epigyne is small, sinuous, somewhat spoon-shaped, diaphanous, and directed backwards parallel to the surface of the abdomen.

*Hab.* GUATEMALA, Sabo in Vera Paz (*Champion*).

In spite of the evident loss of colour and pattern on the abdomen, the colour and markings of the cephalothorax, the colour of the falces and legs, &c., with the form of the genital process, will serve to distinguish this spider without difficulty.

### **Epeira latebricola,** sp. n.

*Adult female*, length 2 lines.

*Cephalothorax* dull brownish-yellow, with a large deep brown nearly central area, embracing the anterior portion of the thorax and the hinder part of the caput.

The *eyes* are in the usual three groups; the four centrals form a square whose anterior side is slightly longest. The eyes of the anterior side are, if anything, a little less in size than those of the posterior; they are separated by an eye's diameter from the lower margin of the clypeus.

The *falces* are rather long, moderately strong, vertical, of a yellow-brown colour marked or suffused longitudinally with brown.

*Legs* moderate in length and strength, 1, 2, 4, 3, brownish-yellow, broadly annulated with deep brown, and furnished sparingly with hairs and a very few fine spines.

*Palpi* similar to the legs in colour and armature.

*Maxillæ* and *labium* yellowish-brown, broadly tipped with pale yellowish.

*Sternum* pale yellow, bordered with yellow-brown.

*Abdomen* large, and of a somewhat spade-shape, broad and truncate before, rather pointed oval behind. It projects greatly over the cephalothorax, and has a hollow under the middle of the fore part to receive the thorax. This portion of the abdomen is black, and its width here is nearly equal to the length. The upperside of the abdomen is almost wholly occupied by a whitish area clouded in parts with brownish-

yellow, beginning nearly the whole width in front and gradually tapering to a small breadth a little above the spinners. The margins of this area are marked with an indistinct white angulated line whose prominent points are indicated by elongate black spots. The sides are black, marked with several parallel slightly oblique rows of more or less coalescing white spots. The hinder extremity of the abdomen is bluff, and a little way above the spinners is a quadrate black patch edged with yellowish; the underside is yellowish-brown mixed with black, and there are two white spots in the longitudinal median line just in front of the genital process, which is small, but prominent, and of a deep blackish-red-brown colour.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider in the form of its abdomen bears much resemblance to *Cyrtarachne*.

## **Epeira nephiloides,** sp. n.

*Adult female*, length 5 to 8 lines.

*Cephalothorax* yellow-brown, clothed with greyish hairs and pubescence, the fore part of the caput and an irregular marking along the centre being of a deep bistre-brown.

The *eyes* are rather small and placed in the usual three groups; those of the central group form a square, and are seated on a tubercular prominence; the height of the clypeus rather exceeds a diameter of one of the fore central eyes, which are almost as large as the hind centrals; those of each lateral pair are seated obliquely on a tubercle, but are not quite contiguous to each other.

The *falces* are powerful, vertical, and of a dark brown hue.

The *legs* are moderate in length and strength; relative length 1, 4, 2, 3. The femora and two basal joints are reddish-orange, the remainder being of a yellowish colour, broadly annulated and sometimes suffused with deep bistre-brown. They are clothed with greyish and other hairs, and armed, but not thickly, with small black spines.

The *palpi* are yellow, the radial and digital joints brownish-black.

*Maxillæ* and *labium* deep black-brown, edged at their extremities with yellow.

*Sternum* similar to the labium in colour.

*Abdomen* large, of an elongate subtriangular shape, rounded before and obtuse at the hinder extremity, which projects somewhat over the spinners; the outer margin of the upperside is marked with an irregular black line, strongest towards the posterior extremity, the enclosed space being pale yellowish, thickly mottled with whitish cream-coloured spots of different sizes, and (in one example) mixed with black in the interstices near the middle and hinder half. The sides and front are yellow-brown, the former marked with an elongate black patch towards the spinners, and with some vertical whitish stripes or dashes. The underside has a large area, square in front, rounded behind, of a jet-black colour margined with bright cream-white. The spinners are large but short, compact, and of an orange hue. The genital process is small, roundish at the base, and has a pale, slender, elongate, tapering sinuous epigyne directed backwards.

In some examples the whole of the upperside of the abdomen is of a uniform whitish-yellow, irregularly margined with black; and in another there is a broad longitudinal central space suffused with red-brown. Of this last example, found at Cubilguitz, Mr. Sarg says:—"The cephalothorax is burnt-sienna, the caput distinctly marked, covered with fine white hairs. Legs bright burnt-sienna towards yellowish, fourth joint to the end black, covered with black hair; between the joints white hairs, giving a greyish appearance to the legs. Abdomen emerald-green, closely dotted with minute golden-chrome-yellow spots, over all a very fine cellular network of dark lines; down the centre is a dark-brown mark, sides chocolate-brown; below orange, with a deep black band from the genital aperture to the spinners; just above the spinners, on either side, is a black velvety patch. Spinners burnt-sienna. Sternum black." From this description it will be seen that the main difference in the preserved specimens is the loss of the emerald-green colour of the upperside of the abdomen.

*Hab.* GUATEMALA, Dolores, Cubilguitz, Menché, Panzos (*Sarg*).

From Panzos we have received an immature female; from Dolores an adult female,

of which Mr. Sarg gives a very similar description to that of the one found at Cubilguitz; and from Menché adult females.

## **Epeira purpurascens,** sp. n.

*Adult female*, length 8 lines; *adult male*, length 5 lines.

*Cephalothorax* dark reddish-brown, clothed, but not thickly, with greyish hairs, from some of which the surface (apparently) gets purple tints in some lights.

The *eyes* of the central group are seated on a slight prominence, and form a quadrilateral figure whose posterior side is much shorter than the anterior; the eyes forming the posterior side are much smaller than those of the anterior, and are separated from each other by only about half a diameter's interval. Those of each of the lateral pairs, which are smallest of the eight, are seated obliquely on a small tubercle, and are not quite, though almost, contiguous. The height of the clypeus is about equal to the diameter of a fore central eye.

The *falces* are strong, vertical, similar to the cephalothorax in colour, and clothed with greyish hairs.

The *legs* are rather long, strong, relative length 1, 2, 4, 3, of a dark yellow-brown hue, clothed with hairs, of which those on the tibiæ have a reddish hue, the rest dark, mixed with grey; they are also armed with spines, which, however, are neither very strong nor conspicuous.

The *palpi* are similar to the legs in colour and armature.

The *maxillæ* and *labium* are dark yellow-brown, with pale whitish margins at their extremities, and the *sternum* is of a similar hue.

The *abdomen* is large, subtriangular, rounded before and obtuse behind; on the upperside and sides it is of a rich chocolate-brown, clothed thinly with long reddish bristles, and divided longitudinally by a central tapering yellowish stripe, reaching from end to end, and which has two somewhat lozenge-shaped enlargements towards its anterior extremity. The underside is orange, clothed with reddish hairs, and with a large, black, central triangular area, whose posterior angle, close to the spinners, is truncated. The spinners are short, compact, and of a dark yellowish-brown colour. The genital aperture, which is of characteristic form, is furnished with an exceedingly long slender epigyne, bending sharply over from its fore extremity and, running parallel to the surface of the abdomen, reaches with its sharp point the base of the inferior spinners.

The *male* differs in several respects from the female. The caput is much drawn out before, the eyes being on much stronger prominences, though their relative sizes and positions are similar. The *falces* are long and slender, directed backwards and much bent inwards below their base. The *legs* are yellow-brown, partly annulated with yellowish, and their spinal armature is much stronger and more conspicuous, the colour of the spines being mostly pale yellowish with bistre-brown bases. The tibiæ of the second pair are bent and much enlarged on their inner sides forwards, where the spinal armature is very strong, some of the spines being black. The *palpi* are short; the palpal bulb is of enormous development; the palpal organs are very prominent and complex, but no description would avail for their satisfactory comprehension, which can be obtained only from accurate figures.

*Hab.* GUATEMALA (*Sarg*); PANAMA, Bugaba (*Champion*).

Both sexes of this fine and distinct spider are contained in the collection made by Mr. Champion at Bugaba, Chiriqui. An adult female is also in Mr. Sarg's Guatemalan collection, but I can find no special note as to its locality.

## **Epeira gravabilis,** sp. n.

*Adult female,* length 3 lines.

*Cephalothorax* rather short and broad, but otherwise of normal form. Colour yellow-brown, with darker markings behind the ocular area and also along the normal grooves and indentations; the sides of the caput, which is very short, converge forwards.

*Eyes* in the usual three groups. The four centrals form a small square, or trapezoid, perhaps a trifle longer

than broad; the posterior pair of eyes are larger than the anterior, which last are separated from the lower margin of the clypeus by an eye's diameter. The eyes of each lateral pair are almost contiguous to each other, and are placed in a parallel line to the lower margin of the caput.

The *falces* are strong, vertical, prominent near the base in front, and of a dull yellowish hue.

The *legs* are short, 1, 4, 2, 3, or 1, 2, 4, 3, moderately strong, of a brownish-yellow colour, faintly annulated with yellow-brown, mostly so near the anterior extremities of the femora. They are furnished with hairs and spines, but most of them are rubbed off, though, judging from what remain, the spines are not very long nor strong, nor very numerous.

The *palpi* are similar to the legs in colour and armature.

*Maxillæ* and *labium* yellow-brown, tipped with pale yellow. *Sternum* brownish-yellow.

The *abdomen* is large, short heart-shaped, or subtriangular, a little broader in front than long, somewhat subangular before as well as behind, and projects greatly over the thorax. At the broadest part in front there is a slight subangular prominence on each lateral margin at the shoulders, and close behind it, on each side, a sharply dentated deep brown line runs backwards towards the spinners, where the two lines converge and almost unite. The triangular area included between these dentated lines is dark yellowish-brown, the rest of the upperside and sides being of a dull hue closely mottled with whitish cretaceous spots; in the middle of the most prominent part of the anterior extremity is a large white spot. The sides have some broken blackish markings, and the underside, which is of a dull brownish colour, has two white blotches, one on each side of the median line, halfway between the frontal process and the spinners. This process is prominent and characteristic in form, and has a slender, sinuous, transversely rugulose epigyne directed horizontally backwards over its aperture.

*Hab.* PANAMA, Volcan de Chiriqui (*Champion*).

This spider belongs to the *E. angulata*, Clk., group.

### **Epeira rufa,** sp. n.

*Adult female*, length 4 lines.

This fine species is of the *E. angulata*, Clk., group.

The *cephalothorax* is of a brownish-orange-red colour, clothed with fine greyish hairs.

The *eyes* are in the usual position; those of the central group form as nearly as possible a square, whose posterior side may be very slightly longer than the anterior; the eyes forming the posterior side are of an amber colour and are larger than the others, though nearer together. The height of the clypeus is about equal to the diameter of one of the fore centrals.

The *falces* are powerful, vertical, and similar in colour and clothing to the cephalothorax.

The *legs* are moderately long and strong; they are of an orange-brown colour annulated with yellow, the extremities being reddish-bistre-brown; their relative length is, 4, 1, 2, 3, though the difference, if any, between 4 and 1 is very slight. They are armed with not very strong spines, and clothed with greyish and other hairs.

The *palpi* are similar to the legs in colour, markings, and armature.

The *sternum* is similar to the cephalothorax in colour, but of a deeper hue towards the margins, and clothed with greyish hairs.

The *maxillæ* and *labium* resemble the falces in colour, but are paler at their extremities.

The *abdomen* is large, subtriangular, projects well over the base of the cephalothorax, and is produced at its fore extremity on either side into a strong, pointed, conical eminence. Its colour is a uniform brownish-yellow tinged with reddish, and darkest in front. It is clothed with fine greyish pubescence, and has a few dark bristles and hairs. Between the spinners (which are strong, short, and compact) and the genital aperture are two large cream-white blotches in a transverse line. The genital process is large, prominent, and of an obtuse transverse shape, with an epigyne of a short, broad form, rounded at the extremity, and directed a little backwards over its aperture; its colour is a shining rich brown-black.

*Hab.* GUATEMALA, between Petet and Chicoyoito (*Sarg*); PANAMA, Bugaba (*Champion*).

This spider was found in a crevice in a wall between Petet and Chicoyoito, near the river; and Mr. Sarg has the following note upon it:—"Cephalothorax brown, a mixture of burnt-sienna and purple-madder, covered with fine grey hairs; central pair of eyes yellow; legs and palpi burnt-sienna banded with sepia; abdomen like the thorax, across the highest ridge more pure burnt-sienna, and behind this wavy irregular transverse lines of the same; underneath pale sepia, with two yellow-ochre spots between the spinners and the fore extremity." It was also found at Bugaba, Chiriqui, by Mr. Champion.

## **Epeira hoxæa,** sp. n.

*Adult female*, length a little over 4 lines.

*Cephalothorax* of ordinary form. Sides of caput parallel. Caput rather broad, and the middle of the ocular area considerably drawn out or prominent, the hinder part of the area of the central group of eyes being rather raised above the rest of the caput. The colour is pale yellow, the fore part of the caput strongly suffused with rusty-reddish-brown. A central longitudinal dark red-brown line, with an enlargement on each side about the middle of the caput, runs back from the hind central eyes to the thoracic indentation, where it is enlarged into a conspicuous angular blotch; there are also some slight brown markings along the oblique indentations between the caput and thorax.

The *eyes* are small, in the usual three groups; the central group forms a square, whose posterior side is much shortest, and its eyes separated by more than a diameter's interval; those of the anterior side separated by nearly twice the diameter of one of its eyes, which are also separated from the lower margin of the clypeus by rather more than a diameter. The eyes of each lateral pair are seated on a small tubercle, contiguous to each other and parallel to the lower margin of the caput.

The *falces* are tolerably long and powerful, of a pale yellow hue, and slightly directed backwards.

The *legs* are not very long nor strong, 1, 2, 4, 3, of a pale yellow colour, annulated and marked with rusty-reddish-yellow-brown. They appear to have been clothed with hairs and armed with spines, of which, however, few remain.

The *palpi* are tolerably long, and similar to the legs in colour and markings.

The *maxillæ* and *labium* are yellow-brown, tipped with pale yellowish.

The *sternum* is yellowish, with a strong longitudinal central yellow-brown band, which sends off some short spurs on each side to the insertions of the legs.

The *abdomen* is large, subtriangular, but rounded both before and behind; at each shoulder is a sharpish conical nipple-like prominence, followed on the same side, backwards, by two other similar ones, making a lateral row of three on each side; also at the hinder extremity, at the beginning of the posterior declivity, are five other prominences of about the same size, four in the form of a diamond and one in the centre, the hinder prominence being the smallest. The general colour is whitish-yellow, with a broad, central, longitudinal, deeply dentated, reddish-yellow band; the sides are marked indistinctly with whitish and reddish-yellow-brown, vertical, narrow stripes, and the underside is indistinctly marked with yellow-brown, whitish, and rusty, and has two white blotches, in a transverse line, a little way behind the genital process. This process is not very large, of a reddish-yellow-brown colour, and is prolonged backwards by a rather strong, transversely rugulose, yellowish epigyne, which enlarges a little near its sharp point, the enlargement being dark brownish-red.

*Hab.* PANAMA, Tolé (*Champion*).

It is probable that the only example examined had lost colour and pattern by preservation; but the number and position of the nipple-like prominences on the abdomen, as well as the form of the genital process and epigyne, will easily serve to distinguish this spider.

## **Epeira consequa,** sp. n.

*Adult female,* length $3\frac{1}{2}$ lines.

*Cephalothorax* broad-oval; caput broad, truncated before, the sides subparallel, or rather converging forwards, flattish on the upper surface, but the sides rather gibbous. The thorax is reddish-yellow-brown in colour, the caput deep brown, and the whole is clothed with short grey hairs and pubescence.

The *eyes* are in the usual three groups. The central group seated on a prominence, the hinder pair on a strong, prominent, geminated, pale yellowish-brown tubercle. The eyes of this group form a square, whose anterior side is slightly the shortest, and the eyes composing it are rather smaller than the posterior pair, which are of a dull amber colour. The height of the clypeus is nearly half that of the facial space. The eyes of each lateral pair are very small, apparently almost equal in size, seated on the outer side of a slight tubercle, separated from each other by at least half a diameter of the anterior eye, and placed not obliquely but parallel to the lower margin of the caput.

The *falces* are long, strong, rather prominent at their base in front, very slightly inclined to the maxillæ, of a yellow-brown colour, suffused with deep brown towards their extremities, and clothed with grey hairs.

The *legs* are rather short, not very strong, 1, 2, 4, 3; they are rather paler in colour than the cephalothorax, annulated with deep brown, and furnished with hairs and spines, the latter not very long nor strong, and mostly of a pale hue.

The *maxillæ*, *labium*, and *sternum* are yellow-brown, the two former broadly tipped with pale yellowish-white.

The *abdomen* is large, broad-oval, projecting greatly over the thorax; at each shoulder, or fore corner on the upperside, is a strong, blunt-pointed, or very obtusely-conical hump or prominence, and on each side are three rudimentary ones in a longitudinal line along the margin, the hinder one rather more than halfway towards the spinners; these slight prominences are connected by a longitudinal dentated black line, which reaches very nearly to the spinners. The whole upperside is mixed with black, brown, yellow-brown, and a paler whitish hue, which last suffuses most of the area just behind the fore-corner humps; within the indented lines mentioned above are two others with stronger indentations, edged brokenly with yellowish, and running parallel (one on each side) to the lateral marginal ones, and converging towards the spinners, but not reaching them; portions of this line are stronger than the alternate portions, and form a series of short oblique black bars on each side of the hinder half of the abdomen, the foremost meeting across the middle. A little in front of, and between, the fore corner humps is a black patch edged with brownish-yellow, and two elongate bright whitish spots in the median line. The sides of the abdomen are blackish, and the underside is of a dull leaden hue, with some minute white points, and with a broad, somewhat rusty-brown, longitudinal band on each lateral margin. The spinners are short, strong, very compact, the inferior pair much the largest and of a deep blackish-brown, the others yellow-brown. The genital process is rather large, of a rich yellow-brown colour, with a strong, broad, not very long, rather tapering, but obtusely pointed, epigyne, directed backwards and parallel with the inferior surface of the abdomen; it has a longitudinal central depression, crossed by numerous striæ or fine wrinkles.

Another example of the female (from Chiriqui) has the abdomen of a subtriangular form, with scarcely any trace of the small lateral prominences noted in the other example; but the abdomen in this specimen is not in good condition, it being so swollen in the spirit of wine that these prominences had probably become effaced and most of the markings obliterated.

*Hab.* MEXICO, Ciudad in Durango (*Forrer*); PANAMA, Bugaba (*Champion*).

## **Epeira rigida,** sp. n.

*Adult female*, length rather over 5 lines.

*Cephalothorax* oval; caput broad, and the lateral margins converging forwards, not deviating very considerably from the slope of the thorax, *i. e.* the lateral marginal indentation at the caput is slight. Of an orange-yellowish colour, clothed with short greyish hairs, the caput a rich dark brown continued in a somewhat pointed form, or wedge-shape, over the thorax, the fore part of the caput being somewhat mottled with orange-brown.

The *eyes* are of moderate size and in the usual three groups; those of the central group form a square whose

posterior side is much the shortest, the eyes forming this side being separated by a diameter. The anterior pair of eyes of this group appear to be rather the largest and to be separated from the lower margin of the clypeus by an eye's diameter. Those of each lateral pair are seated on a tubercle, nearly contiguous to each other, and very slightly obliquely.

The *falces* are long, powerful, and vertical; they are of a deep brown hue, marked in front with a rather oblique yellowish line or narrow stripe, and paler brownish-yellow towards the extremities.

The *legs* are tolerably long, strong, 1, 4, 2, 3, or 1, 2, 4, 3, of an orange-yellow colour, distinctly annulated and marked with rich deep yellowish-brown; they are furnished with hairs and bristles and armed with spines, of which many are white wholly or in part.

The *palpi* are similar to the legs in colour and armature.

The *maxillæ* and *labium* are rich black-brown, tipped with pale yellowish-white. The *sternum* is dull orange-brown, clouded with dark brown along the middle and on the margins.

The *abdomen* is large, of a somewhat subtriangular form, though rounded at both extremities; at each of the shoulders it is strongly and conically prominent, as well as on each side at the hinder extremity, where it falls perpendicularly to the spinners, and between the two hinder prominences and in the same line is another very much smaller one. The abdomen appears to be densely clothed with a velvety-looking pubescence, and its general colours are black and rich brown mixed with a little yellow-brown, and with a pattern indicated chiefly by short white hairs—this comprises a strongly dentated line from each of the anterior prominences to the posterior prominence on its side. The arc thus included has a mixture of black and brown patches, among which is conspicuous a large, round, convex, boss-like, shining central spot edged (like other portions) with white hairs; and in front of it, a little in advance of the prominences, is another large oval black spot of a similar kind. The underside is black, with a cream-yellow spot a little way in front of the genital process, which is rich black-brown, prominent, and continued by a long, strong, tapering red-brown epigyne; this latter runs backwards parallel to the surface of the abdomen, and its point reaches nearly halfway to the spinners, covering and extending beyond the yellow spot mentioned above.

*Hab.* PANAMA, Bugaba (*Champion*).

This fine handsome spider would probably present many varieties of colouring on examination of a series of examples.

## **Epeira clavispina,** sp. n.

*Adult female*, length 4–5½ lines.

*Cephalothorax* dull orange, clothed with white hairs and pubescence, especially on the caput and fore part of the thorax, the grooves showing the thoracic junction with the caput deep bistre-brown; behind these are also some short lines of the same hue, converging to the median thoracic junction (which is also similarly marked), and indicating the segments of the thorax; these lines, with a brownish-orange ground-colour, form an irregular curved band on either side. The caput, instead of sloping forwards, is rather raised towards the ocular area, which is prominent in the middle, where the ordinary central group of eyes is seated, thus leaving a clypeus of much greater width than usual in this genus, being very nearly equal to half that of the facial space.

The *eyes* are on black spots and in the usual three groups; the central group forms a square whose posterior side is shortest on the almost vertical face of the middle of the caput, and the space in the middle of the square is a little drawn out into a blunt conical point surmounted by a single short black spine; the posterior eyes of this group are larger than the anterior, and are separated from each other by an eye's diameter. Those of each lateral pair are very small and distinctly separated from each other.

The *falces* are strong, tolerably long, yellow, and suffused with reddish-brown at their extremities.

The *legs* are moderately long and strong, 1, 4, 2, 3, similar in colour to the cephalothorax. The femora are broadly and distinctly, some of the other joints faintly, annulated with black-brown; they are furnished with hairs and bristles and armed with spines, of which many are marked with white at the base or tipped with black-brown, and some of the strongest are of a clavate form, the most characteristically formed of these being on the femoral joints.

The *palpi* are moderately long, yellow, and furnished with hairs, bristles, and fine spines.
The *maxillæ* are strong and yellow, tipped with whitish.
The *labium* is broad, short, like the maxillæ in colour, and with an angular apex.
The *sternum* is yellow.
The *abdomen* is large, of a subtriangular form, with three subconical protuberances in the longitudinal median line of the hinder part—the largest at the extremity, where the hinder declivity to the spinners begins, and another very small one both above and below it. This declivity, with a portion of the sides, is blackish freckled with round whitish points; the rest of the abdomen, excepting a blackish transverse patch at the fore margin, is whitish-yellow. The upperside of the abdomen is clothed not only with hairs but with many claviform spines, blackish at their lower and middle portions, which are gouty or enlarged, white at their sharp fine extremities; these characteristic spines are chiefly at the fore and hinder extremities, though perhaps they may have been accidentally rubbed off from the other parts. The underside is marked with a large, somewhat triangular area bearing on its middle a yellowish oval marking drawn out behind into a fine point. The spinners are short, compact, yellow, the front of the inferior pair black. In one example the upperside of the abdomen has, in the median longitudinal line of the fore half, two distinct blackish markings—the anterior one diamond-shaped, the posterior one oval and margined with a whitish line. Probably there would be much variation in the markings of a series of this species. The genital process is characteristic and vertically prominent, with the obtusely-pointed epigyne projecting forwards from its extremity.

*Hab.* GUATEMALA, Cubilguitz in Vera Paz (*Sarg*).

Mr. Sarg found this spider on bushes.

## **Epeira hypocrita,** sp. n.

*Adult male*, length $3\frac{1}{4}$ lines.
*Cephalothorax* oval; thorax nearly circular; caput well produced in the middle of the ocular area, the sides converging forwards. Of a yellowish-brown colour, clothed with whitish hairs and pubescence and marked with dark brown spots, lines, and markings, mostly following the direction of the normal grooves and indentations; four spots form a square near the middle of the thorax.
The *eyes* are of tolerable size, and are in the usual three groups; the central group is seated on a strong prominence, and forms a square whose posterior side is shortest; the anterior eyes are larger than the posterior, and separated from the lower margin of the clypeus by much less than an eye's diameter. The laterals are seated on a strong tubercle, nearly contiguous to each other, and parallel to the lower lateral margin of the caput.
The *falces* are moderately long, weak, and vertical; their profile line, both from in front and from the sides, is hollow; they are of a yellowish colour, with a large proportion in front, at their base, and on the sides dark brown.
The *legs* are rather long, strong, 1, 2, 4, 3; their colour is brownish-yellow, annulated and marked with dark yellow-brown; they are clothed with grey and other hairs, and armed with numerous spines, chiefly on the tibiæ and femora—those on the latter joints are mostly of a pale whitish hue, and some also of the rest are more or less white; at the outer side of the anterior extremity of the exinguinal joint of the first pair is a prominent blunt spine or corneous process, and also a single small, short, sharp, curved spine at the fore extremity of the coxæ of the fourth pair.
The *palpi* are short, yellowish marked with brown; the cubital joint is angularly prominent in front, where it has a long, strong, sinuously curved, tapering, reddish bristle; the radial joint is obtusely produced on its outer side, where it is furnished with a tuft of longish white bristly hairs. The palpal bulb is not large, but the palpal organs are very highly developed, prominent, and complex, with corneous processes and spines; an enormous curved process, bifid at its extremity, issues from near their hinder extremity, and is directed prominently outwards and forwards.
The *maxillæ* and *labium* are dark yellow-brown, tipped with pale yellowish. The *sternum* is dark yellow-brown, with seven marginal yellow spots—three on each side and one at the posterior extremity.
The *abdomen* is subtriangular, with a conical prominence at each of the shoulders or anterior angles, and three

others, much smaller, in a transverse line at the posterior extremity, which is obtuse, and drops thence perpendicularly to the spinners. The middle one of these three prominences is rather the strongest; it is clothed with whitish and other pubescence, reflecting greenish-golden tints in a strong light, and has a few slender prominent bristles on the upperside, which is of a dull greyish-yellow hue; from the summit of each anterior prominence a black-brown dentated line runs to the outer posterior prominence, forming a strong curve whose convexity is directed inwards—the space included by these lines, as well as the whole front of the abdomen beyond the anterior prominences, is dark brown marked longitudinally with a somewhat obscure darker central line. The sides and hinder declivity are nearly concolorous with the upperside, and are marked with blackish-brown broken lines and markings. The underside is of a leaden-black hue, with two white spots—one (the largest) near the middle, the other just in front of the spinners. Looked at in profile the hinder part of the abdomen (where the posterior prominences are placed) is rather elevated, so that the profile line is hollow, and gives the abdomen a slightly constricted appearance.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is allied to *E. armata*, but differs in the abdominal pattern and in the colours and markings of the legs, and also in the precise character of the armature of the coxal and exinguinal joints of the first and fourth pairs. The palpal organs also, though showing a great similarity of development, are not nearly so large, and differ in the form of the processes and in the much less size of the palpal bulb.

**Epeira destricta,** sp. n.

*Adult male*, length $4\frac{1}{2}$ lines.

*Cephalothorax* round in the thoracic region, the sides of the caput converging rather strongly forwards. It is of a yellow-brown colour, clothed with grey hairs; the sides of the thorax, as well as several spots on the occiput, and some short diverging markings on the upper part of the thorax, dark yellow-brown.

The *eyes* are in the usual three groups; the prominence of the central group is well produced forwards, the four central eyes forming a square whose posterior side is considerably the shortest—the eyes composing it are smaller than the anterior pair, and are separated by more than a diameter's interval. The eyes of each lateral pair are placed a little obliquely and almost contiguous to each other on a strong tubercle. The fore central eyes are removed from the lower margin of the clypeus by no more than half a diameter, and from each other by a diameter's interval.

The *falces* are long, rather weak, inclined towards the sternum, hollow in profile both from in front and laterally, and of a pale yellowish colour.

The *legs* are tolerably long, strong, 1, 2, 4, 3, clothed with greyish and other hairs, and armed with spines, the latter strongest and most abundant on the tibiæ and femora, especially on the tibiæ of the second pair. The exinguinal joint of the first pair have a short, curved, blunt-pointed, spiny process at their extremity on the outer side. They are of a yellowish colour, faintly annulated with yellow-brown.

The *palpi* are short; the cubital joints show the broken base of a strong spiny bristle in front of each; the radial joints are strongly and obtusely produced on their outer sides; the digital joints are clothed with coarse white bristly hairs, and have the base produced backwards and outwards into the curved process usual in males of this genus, but in the present species this process is broad and bifid at its extremity. The palpal bulb is large; the palpal organs are highly developed, prominent, and complex, and two large corneous curved processes project at their extremity on the outer side, both obtuse, but the hinder one longest and most curved.

The *maxillæ* and *labium* are dark yellow-brown, tipped with yellowish. The *sternum* is dull yellowish, with an indistinct broad, tapering, central, longitudinal yellow-brown band.

The *abdomen* is subtriangular, but rounded at each end. It is clothed with grey and other pubescence and a few erect and other strong bristles and hairs; at each shoulder it has a conical enlargement, and another smaller one on each side at the hinder extremity at the beginning of the vertical declivity to the spinners, and midway, but in a line between these two prominences, is another, less strong prominence. The space

between these prominences is dark brown mixed with yellowish-brown and blackish; it is much widest in front and bounded on each side by a dentated blackish line, rather broadly bordered outside by a whitish-yellow bar; a slightly curved but irregular blackish line connects these two anterior prominences transversely, and is bordered outside by a very distinct yellowish-white stripe; in the middle, in front of this, is a black-brown dentate marking edged with yellowish-white and tapering to its fore extremity, the front of the abdomen being dark brown mixed with blackish and yellow-brown. The sides are pale yellow-brown, marked with parallel dark brown and dull whitish lines running perpendicularly from the upper to the underside. The underside is black, with a longitudinal, lateral, curved, pale sooty band on each side and some white irregular markings, the chief of which are two (one on each side) near the middle, and another on each side and just in front of the spinners. The spinners are yellow-brown, short and compact.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is allied to *E. armata*, *E. rigida*, and *E. hypocrita*.

## **Epeira guatemalensis,** sp. n.

*Adult female*, length 6 lines; *adult male*, $1\frac{3}{4}$–2 lines.

The *cephalothorax* is of the usual general form, but the occiput is a little gibbous. It is of a dull yellowish colour, clothed with grey hairs and pubescence, and has a large, somewhat irregular, central, deep yellow-brown patch extending backwards in a broken tapering form, and with some irregular markings of a similar colour in front on the caput. There is also a broad, irregular, marginal reddish-yellow-brown band.

The *eyes* are small, but in the usual three groups; those of the central group form a quadrilateral figure, and are seated on a slight prominence—its anterior eyes are rather larger and form a longer line than the posterior pair, which last are separated from each other by an eye's diameter. The height of the clypeus equals nearly the diameter of one of the fore central eyes.

The *falces* are of tolerable length and strength, similar to the cephalothorax in colour, clouded and marked in front (where they are rather prominent) with dark brown.

*Legs* moderately long, not very strong, of a yellowish hue, spotted and annulated with deep yellow-brown; the femora of the first and second pairs are suffused with reddish. They are clothed with greyish and other hairs, and armed with spines both dark and pale-coloured.

The *palpi* are similar in colour and armature to the legs.

The *maxillæ* are deep brown, broadly margined at their extremities with pale yellowish-white.

The *labium* is also dark brown, tipped with whitish.

The *sternum* is yellow-brown, with some indistinct paler blotches opposite the insertion of the legs.

The *abdomen* is large, massive, subtriangular, rather rounded before and somewhat truncate behind; near each of the fore corners or shoulders is a subconical elevation, and at the hinder extremity a group of five similar ones, though some are not so large—four form a diamond-pattern, with the fifth in the centre, the smallest being the posterior one. From this group the abdomen runs perpendicularly to the spinners. A large portion of the upperside, which is whitish-yellow, clothed with greyish-yellow pubescence, is occupied by a somewhat tapering, irregularly-edged blackish area extending from the fore margin at its greatest width to the anterior humps or elevations, and then with an incurved direction to the exterior humps of the hinder group—this area has in the middle of its broadest part (in front) several white blotches, of which the central one is far the largest and most conspicuous. The sides are similar in colour to the upper part and have a large blackish mottled patch near the spinners; and the underside is blackish, with two white spots in a transverse line just in front of the genital process, this latter being strong and prominent, and terminating with a short, strong, somewhat tapering epigyne, whose direction is backwards and parallel with the under surface of the abdomen. The spinners are short, strong, compact, dark brown, the superior pair striped with yellow. The anal prominence is very distinctly 3-jointed, yellow marked with dark brown. The perpendicular portion between the spinners and the group of prominences is suffused with reddish-yellow-brown.

In the *male* the abdomen nearly resembles that of the female in form; some of the prominences, however, terminate with a minute red-brown spine or point, and the upperside is of a somewhat quadrate form, of

a brownish hue irregularly marked with darker spots and lines; the anterior portion of the abdomen is also more produced.

The *cephalothorax* is dark reddish-yellow-brown, with the caput and thoracic margins yellowish. The ocular region is rather produced forwards, and the falces less strong than in the female, and directed rather backwards.

The *legs* are yellow, the femora of the first and second pairs dark brown, the other femora yellowish, faintly annulated with a darker hue; armed with spines, these being most conspicuous on the tibiæ of the first and second pairs.

The *palpi* are short, the palpal bulb large; the palpal organs well developed, complex, and prominent.

*Hab.* GUATEMALA, Livingston, Chicoyoito, Polochic valley near Tamahu, Cubilguitz (*Sarg*).

This spider belongs to the *E. verrucosa*, Walck., group.

## **Epeira armata,** sp. n.

*Adult male*, length $3\frac{2}{3}$ lines.

*Cephalothorax* of a somewhat oblong-oval form, rather broader at the fore part of the thorax than behind, the sides of the caput converging forwards. Colour yellow-brown, the occiput and normal indentations marked with broken lines and spots of dark yellow-brown. It is clothed with greyish hairs, of which there are some longer and stronger than the rest just behind each lateral pair of eyes.

The *eyes* are of tolerable size and in the usual three groups. The four central eyes are on black spots and form a square whose posterior side is considerably the shortest, its eyes being separated by a diameter's interval; the height of the clypeus appears to be about equal to the diameter of one of the fore central eyes. Those of each lateral pair are seated on a strong tubercle, contiguous to each other and slightly obliquely placed.

The *falces* are moderately long, rather slender, or weak, the profile lines (both lateral and in front) hollow, and slightly directed backwards. They are of a pale yellow colour.

The *legs* are rather long, strong, furnished with hairs, some grey, others reflecting greenish-golden tints in a strong light, and armed with numerous spines. The spines on the tibiæ of the first and second pairs, especially on the latter, are the most powerful; some of them are pale whitish in the middle portion, others brown to red-brown. At the anterior extremity of the exinguinal (or basal) joints of the first pair of legs is a strong, prominent, but not very sharp-pointed spine, and at the fore extremities of the coxal (or 2nd joints) of the fourth pair are three short, curved, sharp spines in a row; and in a similar position on the coxæ of the second pair of legs is a small pointed corneous process, tipped with a small tuft of bristly hairs. This exinguinal and coxal armature is characteristic, though it is possibly only sexual.

The *palpi* are short; the cubital joint has a long, strong, tapering sinuous bristle in front; the radial joint is strongly and obtusely produced on its outer side; the palpal bulb is large; the palpal organs are of a rich deep red-brown colour, greatly developed, very prominent and complex, with strong corneous processes and spines. One enormous process, curved, rather enlarged and bifid, or cleft at its extremity, projects perpendicularly upwards on their outer side. The digital joint is furnished with long, bristly, grey and yellowish hairs.

The *maxillæ* and *labium* are yellow-brown tipped with a paler hue. The *sternum* is pale yellowish.

The *abdomen* is subtriangular, with a conical prominence at each of the shoulders, or lateral margin of the broadest part in front, and two others, one on each side of the hinder extremity where the declivity towards the spinners begins, these last two being only half the distance from each other that the others are. The abdomen is of a yellowish-brown colour, clothed with grey and other hairs reflecting greenish-golden tints in a strong light; there are also some strong dark bristles on the upperside; it is lined and reticulated with deep brown in front of the anterior prominences, and on the sides, where there are also numerous round light reddish-brown spots. In front of and between the two posterior prominences is an oblong dark brown area, reaching halfway to the anterior ones, with dentate lateral margins and a prominent curved horn-like prolongation at each of the fore corners, directed outwards and forwards. The anterior prominences are connected by a well-defined black-brown margin to the brown markings on the fore part,

which margin is also followed by a transverse stripe of whitish spots. The underside has broken dark brown lateral margins and markings, with a central white spot. The spinners are short, compact, and of a yellow-brown colour.

*Hab.* PANAMA, Bugaba (*Champion*).

A fine distinct species.

### **Epeira championi,** sp. n.

*Adult female*, length 2 lines; *adult male*, $1\frac{2}{3}$ lines.

The *cephalothorax*, *legs*, *palpi*, and *sternum* are pale yellow, without any markings; the *falces* are similarly coloured, but have the extremities suffused slightly with blackish; the *maxillæ* and *labium* are blackish, broadly tipped with yellow. The form and structure of these parts are normal.

The *eyes* are in the usual three groups, widely separated from each other, and conspicuous from the black spots on which they are seated. The four centrals form a square whose anterior side is slightly the shortest, the posterior eyes being larger than the anterior.

The *falces* are powerful, and rather prominent in front.

The *legs* are neither very long nor strong, relative length 1, 2, 4, 3. They are furnished with hairs and a very few short fine spines.

The *abdomen* is oblong, almost cylindrical, though rather narrowest behind; the hinder part scarcely projects over the spinners, but it is at least perpendicularly truncated there. The upperside is white, with a broad longitudinal central, more or less sooty or blackish band throughout its length. This band tapers or narrows towards the posterior extremity with a prominent angle at each side before, and has a series of white markings along it, more or less separated from each other, and ending in a point behind. The white on the upperside might perhaps be as well described as consisting of these markings and a broad longitudinal band on each side, and the central blackish band would then be described as somewhat irregular stripes with a projecting angle on the outer side near the fore extremity. The sides are marked with two longitudinal well-defined parallel bands, the upper one blackish, the lower one white; and the underside is entirely blackish, but between the spinners and the pattern on the upperside is a single larger or smaller oval or oblong white spot. In several examples all the portions above described as white are bright red-brown or rust-coloured, having only a narrow edging of white by the black markings. The genital process is prominent, of a rich dark red-brown hue, with a short curved epigyne directed backwards.

The *male* resembles the female in colours and general characters, but the fore part of the caput is more prominent; the legs are longer and are armed, especially on the tibiæ of the first and second pairs, with long spines; the pattern on the abdomen is often entirely interrupted in the middle, both on the upper part and on the sides. The *palpi* are short; the cubital joint has a single long, strong, tapering, prominent bristle in front; the radial joint is broad, projecting strongly and obtusely both on the outer and inner sides; the palpal bulb is large, and the palpal organs are very prominent, highly developed, with lobes and corneous processes and spines.

*Hab.* PANAMA, Bugaba (*Champion*).

Examples of both sexes of this very pretty and distinctly marked spider were contained in Mr. Champion's Chiriqui collection. I have no note of its colours when alive, but it is very possible that some of the colours now yellow are green in life.

### **Epeira septem-mammata,** sp. n.

*Adult females*, length $2\frac{1}{2}$ and 3 lines.

The *cephalothorax* is rather broad, and the caput is somewhat gibbous above towards the occiput; its colour is pale yellow, with a very broad dark bistre-brown central longitudinal band, including the upperside and part of the sides of the caput, and reaching from the eyes to the hinder part of the thorax.

The *eyes* are of moderate size and in the usual three groups. The central group form nearly a square, seated on a slight and black prominence; the anterior pair of eyes are the largest, and form a rather longer line than the posterior pair.

The *falces* are powerful, rather long, prominent in front, and directed a little backwards. Their colour is yellow, strongly tipped with dark bistre-brown, and with a large, less dark blotch towards their base in front.

The *legs* are short, not very strong, yellow, distinctly marked and annulated with rich black-brown, clothed with hairs and bristles and a very few fine spines; relative length 4, 1, 2, 3.

The *palpi* are similar in colour to the legs.

The *maxillæ* and *labium* are dark brown, distinctly tipped with pale yellowish.

The *sternum* is of a somewhat shining cream-colour.

The *abdomen* is large, of a short and somewhat quadrate-oval form; it is encompassed on the upperside by seven subconical mammiform eminences of different sizes—one at each of the fore corners (or shoulders) of the abdomen, one (the largest) of a somewhat caudal nature behind, and two others (the smallest) on each side between them. The colour of the abdomen is whitish-yellow above and on the sides, marked with numerous irregular black lines, spots, and veinings. Among these are specially noticeable the black anterior portions of the seven eminences and a dentated longitudinal black line reaching from each of the foremost eminences to the base of the hinder eminence; across the hinder part of the area included by these are two or three transverse black lines, and at its fore extremity are two longitudinal parallel black ones. The underside of the abdomen is black, with two large whitish-yellow patches, one on each side between the spinners and the genital process, which is large, prominent, of a shining deep bistre-brown hue, red in the middle, and furnished with a short epigyne. The spinners are very short and compact, the inferior pair black, the superior pair yellow.

Of one example found by Mr. Sarg at Choctum there is in his notes the following description, taken when alive:—"Cephalothorax shining pale olive-green; caput dark olive-brown, this colour continued as a broad band down the centre of the thorax. Legs olive-yellowish closely banded with brown, palpi ditto. Abdomen dull yellowish-brown, with dotted and linear markings of brown; provided laterally with three pairs of knob-like processes, also with indented lines. Sternum conspicuously deep Naples-yellow. Abdomen underneath black, with two orange spots in front of the spinners." In another example found in the same locality the legs were "yellowish-olive-green banded with brown;" the abdomen "pale brown-madder with a reddish tinge, the processes dark brown-madder, the sternum conspicuously orange." In this description (as in many others) we chiefly note the change of green into yellow or dull yellowish-white.

*Hab.* GUATEMALA, Choctum (*Sarg*).

## **Epeira spinigera,** sp. n.

*Adult female*, length 4 lines; *male* (not adult), 2 lines.

*Cephalothorax* oval; caput full above, broad, sides parallel, covered sparingly with short fine pale hairs; its colour is orange-yellow, as also is that of all the other anterior parts excepting the legs and palpi, which are of a dull greenish-yellow hue, the tarsi suffused with brown.

*Eyes* small, in the usual three groups, very widely separated; seated on black tubercles. The four centrals form a small compact square, whose anterior pair of eyes are smallest and removed by a diameter's distance from the lower margin of the clypeus. Laterals on each side very minute, contiguous to each other, and placed obliquely.

*Falces* powerful, vertical, and prominent near their base in front.

*Legs* short, and not very strong, 1, 4, 2, 3, furnished with hairs and a few rather short dark spines. There are a few shorter but comparatively stronger spines on the front of the femora of the first two pairs (mostly on the first).

The *maxillæ*, *labium*, and *sternum* are normal.

The *abdomen* is large, short-oval, somewhat quadrate (or sides nearly parallel), and subcylindric in form. The fore part projects well over the thorax, and the hinder part projects a little over the spinners, though not in a caudal form. At each of the fore corners of the anterior part on the upperside is a short but con-

spicuous, slightly curved, strong, tapering, sharp-pointed red-brown spine; the upperside is white, cretaceous-looking, and marked only with some dull leaden irregular reticulations and lines; the sides and underside are leaden-black, the former has a few perpendicular tapering white stripes dropping downwards from the upper part, and on the underside are two longitudinal parallel rows on the hinder half of three white spots each, the anterior spot largest, the posterior ones placed on either side of the spinners, which are short, rather small, and black. The genital process is moderately strong, almost perpendicularly prominent, and ending with a very short epigyne directed backwards.

An immature male had the upperside of the abdomen whitish-yellow, with a longitudinal central slightly tapering dark greyish band edged with black, and ending with a large black blotch on each side at the upper part of the end of the abdomen, the black continued over the hinder part and spotted with white; from the black edge of the central band, on each side, issue several strongish black tapering stripes over the sides, where are also a few white spots; the anterior spots on the underside are oblong and very much the largest.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is allied to *E. tauricornis*.

## **Epeira tauricornis,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines; *adult male*, 2 lines.

This spider is one of a group which marks the transition to the Gasteracanthidæ, and in the prevailing rage for the multiplication of genera it might well form the type of a genus separate from *Epeira*; but although no doubt the subdivision of many of the old genera became, and is, necessary for the practical dealing with crowded generic groups, it seems, in some instances at least, to have been carried to excess and to thwart its own end. Upheld, therefore, in the present case with the opinion of so able an Arachnologist as Count Eugène Keyserling, I retain the spider before us, at all events for the present, in the genus *Epeira*.

*Cephalothorax* broad, the caput somewhat quadrate before and gibbous above on each side near the thoracic region. It appears to vary in colour from yellow-brown to a deep bistre-brown, marked with lighter or darker patches, and dotted with short grey hairs or pubescence.

The *eyes* are in the usual three groups; those formed by the two lateral pairs are widely distant from the central group owing to the width of the caput, at the extreme outer fore corners of which they are placed, forming a straight transverse line with those of the fore central pair, which are almost contiguous to the fore margin of the clypeus. The four central eyes form a square, the hinder pair being much larger than the anterior.

The *falces* are rather long, strong, vertical, prominent in front, and similar in colour to the cephalothorax.

The *legs* are short, not very strong; they are of a brownish-yellow colour annulated with darker brown; the femora of the first and second pairs being of a dull orange or red-brown, their anterior halves, as well as the genual joints, being, in a well-coloured example, nearly black. They are clothed with short greyish hairs, but there appears to be an almost total absence of spines. The relative length of the legs is apparently 1, 4, 2, 3, or 1, 2, 4, 3, though the difference between 1, 2, 4, is very slight. The tibiæ have the slightly bent form characteristic of the Gasteracanthidæ.

The *maxillæ*, *labium*, and *sternum* are black-brown, the apex of the labium being of a rounded form, and the maxillæ have a pale margin at their extremities.

The *abdomen* is large, of a somewhat quadrate-cylindric form (like that of the well-known European *Cyrtophora opuntiæ*). It has on the upperside eleven variously sized circular and flattened conical prominences or boss-like humps—three on each side in a longitudinal line, and five forming a diamond-shaped group of four, with one in the centre on the hinder part. The central one of this group appears to be very variable in its size and length: in one example of each sex it is much the largest, and in others the whole posterior portion of the abdomen is drawn out into a tail bearing the prominences at the end of the group and projected in a caudiform manner. The anterior prominence on each side (situated at the fore corners of the abdomen) is much the largest, and terminates in, or is drawn out at its summit into, a strongish, slightly bent, sharp thorn-like corneous spine; all the other humps end with a rudimentary spine of a similar kind.

There seems to be much variety in the strength of these spines. The colour of the abdomen is deep brown above, yellow-brown mixed with darker shades behind, on the sides, and underneath; the humps are deep yellowish-brown. In very well preserved examples no doubt some distinct pattern would be traceable though very variable in different examples, but most of those I have had the opportunity of examining had suffered some deterioration of the epidermis. The spinners are very short and compact. The genital process is tolerably strong, prominent, and directed backwards, the extremity of the epigyne being at right angles to the base. In one example, besides the prominences above noted, there are one or two other very small ones in a longitudinal central line on the upperside of the abdomen.

The *male* resembles the female in general characters and colours (though the abdomen seemed blacker), but is smaller. The *palpi* are short, the palpal bulb large; the palpal organs very prominent, large, and compact though complex. The tibiæ of the two anterior pairs of legs are armed with a few short spines.

*Hab.* GUATEMALA, Cahabon, Cubilguitz, Santa Ana, Antigua, between Retalhuleu and Mazatenango, Retalhuleu, Quezaltepeque (*Sarg*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Both sexes of this spider were found by Mr. Sarg in various localities in Guatemala; also by Mr. Champion numerously at Bugaba and other parts of Chiriqui.

## **Epeira spicata,** sp. n.

*Male* (*immature*), length $3\frac{1}{2}$ lines, length of abdomen $2\frac{1}{2}$ lines.

This spider is nearly allied to *E. tauricornis*, but is larger, and varies in the number and proportions of the spino-tuberculous parts of the abdomen.

*Cephalothorax* longer than broad, the sides of the thorax deep rich brown; caput paler, marked above with patches of a deeper hue, the patches continued backwards in a tapering band to the hinder extremity of the thorax, its margins marked by grey-white hairs, the rest of the upper part of the caput being covered with greyish pubescence; just in front of the thoracic junction are two long, erect, sharp-pointed, red-brown spines, almost close to each other in a transverse line (no trace of these exist in *E. tauricornis*).

*Falces* similar in colour to the caput.

*Eyes* normal.

*Legs* moderate in length and strength, 1, 2, 4, 3; furnished with a few spines, an irregular longitudinal row, some longer and stronger than the rest, disposed on the inner side of the femora of the first pair, these joints being stronger than those of the other legs and of a reddish-orange hue, those of the second pair rather paler. The rest of the joints of these two pairs, and the whole of the third and fourth pairs, are yellow annulated with dark brown, the dark annuli at the fore extremities of the joints being much the broadest.

*Maxillæ* and *labium* black-brown, tipped with whitish. *Sternum* heart-shaped, emarginate in front, black-brown, with small, but distinct, tubercular marginal eminences opposite to the insertion of the legs.

*Abdomen* large, somewhat subtriangular or heart-shaped, with the posterior extremity produced and dilated into five strong conical prominences, all directed backwards, three in the central transverse line being the longest and subequal, the outer ones strongest and divergent, and in front of, or below, the middle one are the two others; at each fore corner of the abdomen is a strong subconical bifid prominence or ending with two tapering spiny points, and from these forming a slightly curved line, with the outer posterior prominence on each side, are two other subconical ones, each ending with a sharp spiny point. The upper surface is thickly pubescent and of a somewhat velvety nature, showing a very distinct pattern though not easy to be described; the prevailing colours are grey, yellowish, brown, and blackish; a yellowish-white line runs from each outer spine of the two anterior prominences, obliquely backwards and inwards, almost meeting at the middle of the upperside, whence they run straight and parallel to each other to the beginning of the posterior production, where they again diverge a little, enlarge, and then terminate. Towards and on the sides are other irregular whitish and dark lines and markings. The underside is black, with a marginal border on each side of variously sized white spots; a transverse

black stripe connects the three middle posterior prominences. It is probable that a series of examples would present much variety in the distribution of colours and consequent apparent pattern.

*Hab.* GUATEMALA, Valley of the Motagua (*Sarg*).

A single example.

## **Epeira variolata,** sp. n.

*Adult female*, length $3\frac{1}{3}$ lines; *male* (*immature*), 3 lines.

The general form of this spider is of the ordinary *Epeira* type. The whole of the anterior parts are yellow; the legs, 1, 2, 4, 3, are slightly annulated with reddish-brown, the darkest annuli being at the fore extremities of the joints. The anterior eyes of the central four form a square whose fore side is distinctly longer than the posterior side; these eyes are very slightly, if at all, larger than the hinder ones, the height of the clypeus being equal to their diameter. The hind central eyes are separated from each other by no more, if not rather less, than a diameter's interval.

The *abdomen* is of a subtriangular or heart shape, rounded before and obtusely pointed behind; the upperside is of a creamy-white colour, with two large, convex, shining black, boss-like marks edged with a narrow whitish border on a black patch in a longitudinal median line a little above the spinners. These bosses are not contiguous to each other, but separated by about half the shortest diameter of the hinder one, which is of a transverse-oval shape, the fore one quite circular; on each side of these is an oblique row of four other smaller and much narrower-oval spots of a similar kind, and similarly margined; the hinder spot is on a level with the hinder boss, and the foremost one is more than halfway along the outer margin of the upperside of the abdomen; some dusky blackish markings form an indistinct border round, but a little short of, the anterior margin, which, as well as the sides and underside, is of a clay-yellow colour thickly mottled with whitish.

The above description is taken from the immature male. The female had evidently lost its colours, and the markings were not so large nor so conspicuous, though similarly placed. The genital process is short, small, and of a simple form.

*Hab.* GUATEMALA, Chamiquin and Cubilguitz (*Sarg*).

Mr. Sarg's description of the immature male is as follows:—"Thorax, legs, and lower part of abdomen orange verging on light burnt-sienna; on abdomen a sharply outlined bright green (metallic when caught) '*Halmsich*,' bordered anteriorly by a narrow white line, posteriorly by ten black ocellæ with a clear white margin." This, with the sketch added of the form and position of the ocellæ, gives the exact pattern, but shows how the true colours have faded.

The proper place of this spider would be next to *E. bivariolata* (anteà, p. 27).

## TURCKHEIMIA, gen. nov.

*Cephalothorax* short; caput broadish and abruptly elevated; thorax rounded and rather gibbose on the upperside, with a strong depression in the middle thoracic junction.

*Falces* strong, rather inclined to the sternum.

*Maxillæ* and *labium* short and Epeiriform.

*Sternum* heart-shaped.

*Eyes* as in *Epeira*; small.

*Abdomen* large, somewhat quadrate, and furnished with gibbosities of various sizes and forms. The cuticle is somewhat coriaceous, and densely clothed with short hairs and pubescence. Spinners short, strong, compact, and in the middle of the underside of the abdomen.

*Legs* short, strong, 4, 1, 2, 3, but little difference between 4 and 1, without spines. Tibiæ rather bent, and enlarging gradually towards their anterior extremities.

This genus bears certain affinities to *Epeira*, *Cyclosa*, *Gasteracantha*, and *Cœrostris*; I have much pleasure in connecting Herr von Turckheim's name with it.

## **Turckheimia nodosa,** sp. n.

*Adult female*, length 3½ lines.

*Cephalothorax* black, shining, and glossy; caput abruptly elevated, the summit rather flat; thorax rather higher at the beginning of the posterior slope than at its junction with the caput. Thoracic indentation rather deep and transverse, a whitish longitudinal central line running from this indentation backwards.

The *eyes* of the central four form a quadrangular figure, whose posterior side is much less in length than its anterior side.

The *legs* are dull reddish-orange, with black and pale yellowish annuli; palpi black, with a yellow annulus at the base of the radial joint.

*Falces* black.

*Maxillæ* and *labium* deep black-brown, tipped with a pale hue.

*Sternum* heart-shaped, black, with a central longitudinal yellow-ochreous stripe on its posterior half.

*Abdomen* large, of a somewhat quadrate form, with its fore corners rounded off; upper surface flattish convex, with four very large divergent corner-gibbosities which are enlarged and round at the extremities, of a blue-blackish metallic hue, clothed with short yellowish and other hairs and pubescence. At the posterior extremity between the two hinder gibbosities are two others much smaller, of a nipple form, and in the median longitudinal line, the anterior one being slightly the longest. These last, as well as the whole upper surface, hinder slope, and sides of the abdomen, are of a dull reddish-orange-yellow, marked with a bold pattern of oval and other forms, of a deep blackish-yellow-brown colour, and of a velvety appearance, the various markings margined with a line of bright yellowish-white hairs. The colours and markings are apparently caused by dense pubescence. The underside is black, marked on each side with two or three transverse scribbly lines of white hairs. The genital process is very small and inconspicuous, and of a dull whitish-leaden hue. Spinners black-brown.

*Hab.* GUATEMALA, Chicoyoito (*Turckheim*).

We are indebted to Mr. Sarg for an example of this exceedingly interesting spider; it was found by Herr von Turckheim in its small geometric snare on a citron-tree at Chicoyoito.

## **Turckheimia walckenaërii,** sp. n.

*Adult female*, length 2½ lines.

The *cephalothorax* has the caput considerably raised, and the sides of the thorax gibbous, the indentations between these two parts (caput and thorax) being very strong, and at the thoracic junction is a deep transverse somewhat curved pit or indentation. The colour is deep brown, paler on the front and sides of the caput, and clothed, but not densely, with coarse whitish or grey hairs.

The *eyes* are small, in the usual three groups. The four central eyes describe a square whose anterior side is longer than the posterior, and its eyes are placed close to the fore margin of the clypeus.

The *falces* are not very long, but strong, inclined backwards and of a deep brown hue.

The *legs* are rather short, moderately strong, clothed with coarse grey and other hairs, and a very few fine spines, relative length 1, 2, 4, 3, or 1, 4, 2, 3. They are of a yellow colour, the fore half of the femora of the first and second pairs is deep blackish-bistre-brown, the other legs and joints annulated with deep brown.

The *palpi* resemble the legs in colour and armature.

The *maxillæ* and *labium* are deep brown tipped with dull yellowish.

The *sternum* is black, with eight dull orange spots or eminences round the edge, corresponding with the insertions of the legs. The posterior spot is geminated, forming one only for the two posterior legs.

The *abdomen* is large, somewhat quadrate, and has a small subconical eminence on each side towards the anterior extremity, and four others forming a group, two in the median line and one on each side at the posterior extremity, which extends considerably over the spinners, and is somewhat caudiform; the distance from the spinners to the eminences being equal to the whole length of the abdomen. The colour above and on the sides is pale yellowish-brown, marked with black markings and whitish spots and lines (owing to the shrinking of the epidermis in spirit of wine but little regular pattern can be seen, excepting a large curvilinear diamond-shaped marking indicated by white lines, just in front, in the middle, of

the two anterior eminences; one example has the whole of the upperside and sides closely marked with yellowish points or spots). The underside, including the spinners, is black with some irregular white spots on the sides forwards and across the middle. The genital process is deep brown, characteristic but not very prominent, with a short epigyne directed backwards.

*Hab.* GUATEMALA, Volcan de Fuego and Chiacam (*Sarg*).

## CAREPALXIS, Koch.

### Carepalxis tuberculifera, sp. n.

*Adult female*, length slightly less than $1\frac{1}{2}$ line.

*Cephalothorax* dull orange, clothed with yellowish-grey hairs. Occipital eminence broad, obtuse, and massive.

*Eyes* not large, in the usual position, with deep bistre-brown rims; those of the central group form a quadrangle whose anterior side is shortest. The height of the clypeus is distinctly less than half that of the facial space.

*Legs* short, 1, 2, 4, 3, dull yellowish tinged with brown, moderately strong. Clothed with hairs only.

*Falces* similar in colour to the cephalothorax, with a dusky transverse bar near their extremities, strong, straight, vertical.

*Palpi* similar to the legs in colour.

*Maxillæ*, *labium*, and *sternum* similar in colour to the cephalothorax.

*Abdomen* large, heart-shaped, projecting greatly over the thorax; at each fore corner are two or three small tubercular prominences. It is of a dull clay-colour, clothed with short hairs and a few short black spine-like bristles, and with some indistinct brown markings, and four black impressed spots on the upperside, the latter forming a large square, whose fore side is shorter than the others. In front, in the hollow between and below the tubercles, it is blackish-brown, with a longitudinal central line of yellow spots. Sides brown with pale spots, the underside blackish. The genital process (so far as I can see it) appears to be of very simple form.

*Hab.* PANAMA, Bugaba (*Champion*).

A single example.

### Carepalxis gibbosa, sp. n.

Not quite *adult female*, length $2\frac{2}{3}$ lines.

*Cephalothorax* covered with short yellowish-grey hairs. Caput darkish yellow-brown, the thorax much paler, a strong longitudinal median indentation from the ocular area to the occipital eminence, which is composed of two strong, slightly divergent, dull orange-yellow conical prominences, whose bases are contiguous. The lower fore corners of the caput rather rounded.

*Eyes* in the ordinary position, not very large; the four centrals form a quadrangle whose anterior side is shortest, and the height of the clypeus is equal to half that of the facial space.

*Falces* moderate in length and strength, of a dull orange colour, clothed with greyish hairs, prominent in front, the prominent part and also the extremities marked with a deep bistre-brown blotch.

*Legs* rather short, moderately strong, 1, 4, 2, 3, of a yellow colour, the anterior portion of the femora and the genua being dark brown and the anterior parts of the other joints more or less suffused with the same tint. They are clothed with grey hairs and armed with spines, of which a group of several on the anterior sides of the femora of the first pair are the most noticeable, two of them being much the longest and strongest, dark at the base, and the rest pale-coloured.

*Palpi* yellowish, the digital joints rather long and a little tumid, looking like those of the very undeveloped male palpi, and terminating with a thickly pectinated black claw.

*Maxillæ* brown, pale greyish at their extremities.

*Labium* quadrate and brown at the base, pale and pointed at the apex.

*Sternum* pale yellow-brown, with some whitish-yellow cretaceous-looking markings along the middle.

*Abdomen* rather large, somewhat heart-shaped, projecting greatly over the thorax; at its fore extremity on

the upperside are two subconical prominences near together, side by side, in the median line, and, a little further back, another larger prominence at each fore corner, also two rudimentary ones on each side towards the hinder part; it is of a dull yellowish colour, thickly clothed with short yellow-grey pubescence, among which are mixed, on the upperside, a few short, somewhat pointed-claviform black spines—these are most numerous in front. A large, blackish, somewhat quadrate, dentate-edged area occupies a considerable portion of the upperside, on which are also four small, oblong, black, impressed spots, placed obliquely, and forming a quadrangle whose anterior side is shortest. Underside black, with two white spots in a transverse line a little way in front of the spinners.

*Hab.* PANAMA, Bugaba (*Champion*).

A single example.

### **Carepalxis americana,** sp. n.

*Adult female*, length 2 lines; *male*, 1 line.

The whole of the fore part of this spider is of a brightish orange-brown, more or less completely covered with short grey hairs. *Cephalothorax* large, broad and quadrate in front; the occipital elevation very strong, transversely keel-shaped, with the corners rounded off and the slightest possible depression in the middle when looked at from in front.

*Eyes* unequal; the posterior pair of the central four much the largest, amber-coloured, and separated by an eye's diameter; those of each lateral pair very small, contiguous, on a small tubercle, and close to the anterior lower corners of the caput.

*Legs* (♀) rather short, not very strong, furnished with short grey hairs only, 1, 4, 2, 3; tibiæ of the first two pairs very slightly bent.

*Falces* moderate in length and strength, straight, vertical.

*Abdomen* large, heart-shaped, fitting up over the thorax close to the occipital elevation, slightly and subconically protuberant at each anterior corner of the upperside; of a uniform dull pale yellowish-brown, clothed with short greyish hairs, among which are a few dark ones of a more bristly kind; on the middle of the upperside are four impressed black round spots, forming a quadrangle whose shortest side is in front. Spinners short, compact. Genital process red-brown, small, prominent, characteristic, and furnished with a small epigyne.

In the *male* the eyes are rather larger in proportion, the occipital eminence less high and less keel-shaped, being rounder behind, and more massive. The legs, 1, 2, 4, 3, the first pair longer, and the first and second pairs, particularly the femora, stronger, and the tibiæ armed with a few strongish spines. The falces are somewhat granulose in front, and the caput also on the upperside. The palpi are very short, the palpal bulb small; the palpal organs not very complex, and presenting no very remarkable processes; the digital joint has a short curved obtuse process at its hinder extremity. The abdomen is of a similar hue, but has some oblique dark lines on the sides, and a transverse dark, but not very conspicuous, stripe just in front of the anterior protuberances.

*Hab.* PANAMA, Bugaba in Chiriqui (*Champion*).

## CYCLOSA, Menge.

### **Cyclosa fissicauda,** sp. n.

*Adult female*, length 3–4 lines.

The whole of the fore part of this spider is of a uniform pale yellowish hue, clothed with pale whitish hairs and pubescence.

The *eyes* are small, seated on black spots, and in the usual three groups, which are, however, less widely removed from each other than in numerous species of *Epeira*, owing to the less width of the fore part of the caput. Those of the central group form a trapezoid whose posterior side is distinctly shorter than the anterior side.

The *legs* are moderately strong, not very long; their relative length, 1, 2, 4, 3; they are armed with bristles and spines, most of which are on the metatarsi and tarsi.

The *palpi* are similar in colour and armature to the legs.

The *falces* are strong and vertical.

The *maxillæ* and *labium* are similar to the falces in colour; the former are sometimes suffused in the middle with dusky; the latter is pointed at the apex and its lower half is black.

The *sternum* is blackish, marked with six yellow raised spots on the margin opposite to the insertions of the three anterior pairs of legs, and bisected longitudinally with a yellow stripe, the stripe strongly constricted near the middle, in some examples broken into two or three spots of different size and form.

The *abdomen* is large, somewhat oblong-oval in form, of a cream-white colour all over, clothed with grey pubescence and destitute of any markings, at any rate in the preserved specimens, but a little suffused with yellow-brown on the sides. On the fore part, towards but not close to the fore margin, are four distinct, though not very large, somewhat tubercular subconical eminences forming a square; the hinder extremity is more or less produced and projects considerably over the spinners, and the caudiform portion is cleft deeply at the end into two large obtusely pointed lobes; the underside, embracing the spinners on each side, is white. The spinners are short, compact, and of a pale yellow-brown hue. The genital process is of moderate size, prominent, of characteristic form, and has its hinder portion recurved in a kind of short epigyne.

*Hab.* GUATEMALA, between Dolores and Chapallal, and between Dolores and Chisec (*Sarg*).

An example found by Mr. Sarg between Dolores and Chapallal had the abdomen (at the time it was taken) of "a creamy-yellow-pink hue." Others were found between Chisec and Dolores.

This spider apparently belongs to the *E. anseripes* group.

## **Cyclosa lacerta,** sp. n.

*Adult male*, length $1\frac{1}{2}$ line.

*Cephalothorax* broad and rounded behind, moderately convex above. Caput comparatively narrow, and its fore part sloping downwards; the colour of the cephalothorax is deep bistre-brown, paler in the ocular region, and the thoracic portion is narrowly but distinctly margined with dull yellow.

The *eyes* are on black spots and in the usual position, forming a square whose hinder side is shortest; the anterior pair of the central group are apparently rather larger than the posterior pair—they are seated on a prominent tubercular projection, and also form a considerably longer line than the posterior pair, the eyes of which are of a pearly colour, and separated from each other by a very narrow interval.

The *falces* are moderately long, rather slender, and directed backwards, being dark brown in colour, with paler extremities.

The *legs* are moderate in length and strength, 1, 2, 4, 3, 2 and 4 differing little, if anything at all. The colour of the femora of the first pair is deep brown like the cephalothorax, the other femora are similar but pale yellowish at their base, the remaining joints are yellow-brown, or yellowish, annulated with darker yellow-brown. They are clothed with short hairs and some spines, the most conspicuous of which are on the tibiæ of the first and second pairs. The surface of the tibiæ of these pairs is roughened with minute granular tubercles.

The *palpi* are short; a strong, tapering, black, prominent bristle issues from the fore extremity of the cubital joint. The digital joint has a curved process at its base on the outer side. The palpal bulb is large, the palpal organs very prominent, highly developed and complex, with several characteristic lobes and corneous processes.

The *maxillæ* and *labium* are dark black-brown, edged at their extremities with yellowish.

The *sternum* is similar to the cephalothorax in colour, and is margined with seven yellowish-white spots, three on each side, and one at the pointed posterior extremity.

The *abdomen* is long-oval or somewhat subcylindric in form, the hinder extremity produced in an obtuse caudiform shape over the spinners. The upper part and sides appear to cover or overlap the underside, roof-fashion, though this appearance may only be due to contraction in the process of preservation in spirit of wine; from the same cause, perhaps, may also arise a strong contraction across the middle of the abdomen, though I think this latter is normal. The colour is yellow-brown, marked above and on the sides with black, and with some yellowish or white spots above on the anterior half, and one at the posterior extremity on the upperside. The underside and spinners are black, the latter strong, short, and compact.

*Hab.* GUATEMALA, between Chichochoc and Coban (*Sarg*); PANAMA, Bugaba (*Champion*).

This spider is nearly allied to *Epeira tauricornis*, though easily distinguishable from it by the absence of tubercular prominences and spines on the abdomen.

### **Cyclosa index,** sp. n.

*Adult female*, length to base of posterior prominence $1\frac{1}{2}$, to extremity of the same $2\frac{1}{4}$ lines.

Allied to *C. conica*, Pall., but differs in the form of the abdomen, and in the size, shape, and position of its posterior production.

The *abdomen* is nearly globular, and projects greatly over the thorax; on each side above, at the fore extremity, are two conical eminences, their height equal to their breadth at the base; and from the middle of the hinder extremity is another much longer eminence, tapering, and equal in length to the interval between its base and the fore extremity of the abdomen on the upperside, and the spinners on its underside; this eminence is directed backwards, and rather upwards, at right angles to a line drawn from the spinners to the anterior side of the fore eminences. The posterior eminence gives the abdomen the shape of a peg-top. Its colours are a variegated mixture of dark black-brown, brown, yellow-brown, white, and cream-yellow, with a somewhat dagger-shaped yellowish marking along the middle of the upperside; the blade of the dagger-shaped marking is rather dentate along its edges, and its point dilates into a yellow spot or blotch at the base of the hinder prominence, and on each side of the dagger-blade is a largish irregular black marking. Genital process small, but characteristic in form, and directed backwards.

The *cephalothorax* is dark yellow-brown.

*Legs* pale yellow, 1, 4, 2, 3; the fore extremity of the femora, and the genua of the first and second pairs, dark brown; with a few other irregular markings of the same hue on the other joints and legs; furnished with hairs, but no spines, or at any rate very slender ones.

*Palpi* yellow.

*Falces*, *maxillæ*, and *labium* yellow-brown, the maxillæ and the labium paler at their extremities.

*Sternum* blackish, surrounded by a marginal row of very distinct cream-yellow tubercles opposite the point of insertion of the legs.

Across the middle of the underside of the abdomen, between the spinners and the genital aperture, is a transverse raised ridge marked with white irregular spots on a black ground.

*Hab.* GUATEMALA, Tamahu (*Sarg*).

A single example.

## ARGIOPE, Audouin ex Savigny.

### **Argiope trivittata,** sp. n.

*Adult female*, length $3\frac{1}{2}$ lines; *adult male*, $2\frac{1}{4}$ lines.

♀. *Cephalothorax* yellow, tinged with orange, marked with a longitudinal central and lateral dark yellow-brown bands. The lateral band on each side is marginal and the broadest, and does not reach further forwards than the marginal indentation; the central one reaching to the ocular area.

*Eyes* all black and rather small; the four centrals are equal in size and form a square, whose anterior side is

very slightly the shortest; the hind centrals are slightly nearer together than each is to the hind lateral eye on its side. Those of the anterior row are equidistant from each other; those of each lateral pair are contiguous to each other and seated obliquely on slight tubercles. The height of the clypeus is no more than half the diameter of one of the fore central eyes.

*Falces* moderate in length and strength; straight, vertical, and similar in colour to the cephalothorax.

*Maxillæ* and *labium* dark brown tipped with pale whitish.

*Legs* moderately long, 1, 4, 2, 3, tolerably strong, armed with longish spines; of the same colour as the cephalothorax, faintly annulated and marked with yellow-brown; an indistinct longitudinal line of this colour on the inner sides of the femora.

*Palpi* and *sternum* similar to the legs in colour.

*Abdomen* cylindrical, projecting considerably over the thorax. On each side of the median line near the fore extremity is a very small, but perceptible subconical prominence. The upperside has a broad longitudinal central dark brown band, with a much narrower white one on each side, the latter marginally defined by black lines. The central band also has some black as well as white markings on it. The fore part of the abdomen is almost entirely white. The sides are marked with black and white, some of the markings being rather oblique. The underside is of an olive-brown colour, with a longitudinal row on each side of white spots and short bands, the last being a round white spot on each side of the spinners; these rows are broadly margined with black. On the fore half of the underside are six small but distinct white spots in three pairs or two longitudinal lines. Spinners short, yellowish, marked with deep brown; genital process large, prominent and characteristic, and of a brownish-yellow colour. The hinder extremity of the abdomen is slightly elongated, and projects distinctly over the spinners when looked at in profile, and there are four small white spots forming nearly a square between the upper extremity and the spinners.

The *male* resembles the female in colours and in the general character of the markings, but the pattern on the abdomen differs: the central band is of a yellow-grey hue, and is longitudinally bisected by a black line or narrow stripe until it reaches the middle, when this line joins a black transverse line which cuts the central band in two; the side bands of white are continuous though strongly angulated or bent at the middle, and also defined by marginal black lines. The sides are alternately and longitudinally striped with lines and stripes of olive-brown, black, and white. The underside is black, with a marginal white stripe and spots on each side, and two shorter white lines within them and two white spots in a transverse line at the fore extremity.

*Sternum* yellow with a broad margin of black, leaving a long central wedge-shaped yellow marking.

The *palpi* are short, similar to the legs in colour; the palpal bulb is of moderate size. The palpal organs are prominent, tolerably complex, with some strong corneous projecting processes and spines at their fore extremity.

The above descriptions of this species are made from the specimens preserved in spirits of wine. The following (of the male) is taken from Mr. Sarg's notes on the living spider:—"Cephalothorax pale olive-green, smooth and shining. Caput well-defined, eyes black, a black narrow line down the centre beginning just behind the eyes, and continuing over the thorax; broad black marginal bands on the thorax only; legs olive-greenish-reddish-brown; palpi very pale greenish. Abdomen creamy-Naples-yellow, with dark brown linear markings forming a figure within which the colour is of a richer reddish-yellow." The chief point to be observed in regard to the above is the entire absence in the preserved specimens of the green tints noted by Mr. Sarg; and the small reliance we can place on the colours of such specimens in those cases where (in the Epeiridæ especially) we may suspect our yellow, dull brownish-yellow, and whitish hues to have once been of various tints of green.

*Hab.* GUATEMALA, Dolores, Sacrixpur, between Dolores and Chapallal, and San José River near Chiquimuh (*Sarg*).

## ALPAIDA, gen. nov.

*Cephalothorax* of an oblong form, rather longer than broad; the thorax rounded but not much broader than the caput, the sides of which are parallel and its fore extremity truncated. The caput is much rounded at the occiput, and forms at least half of the cephalothorax.

*Legs* short, and not very strong, 4, 1, 2, 3, nor very unequal in length. Spines few, slender, and inconspicuous.

*Eyes* as in *Epeira*, in three widely separated groups at the base of the anterior slope of the caput. Clypeus almost obsolete.
*Falces* strong, straight, vertical, prominent towards their base in front.
*Maxillæ* short, bent, inclined to the *labium*, which is short, broadish, and of a nearly triangular form.
*Sternum* short, heart-shaped, or nearly round, truncated before and pointed behind.
*Abdomen* rather large, oval, drawn out behind into a short conical caudal prolongation.

This genus is allied to *Epeira*.

### **Alpaida conica**, sp. n.

*Adult female*, length $2\frac{1}{4}$ lines.
The *cephalothorax* is pale yellow with a deeper tinge on the sides of the caput, on each side of which is a large subtriangular blackish patch occupying the indentation between the caput and thorax, and reaching (forwards) to the lateral pairs of eyes. The profile of the thorax and caput forms as nearly as possible a semicircle.
The *eyes* are not large, but rather unequal in size; they are on slightly tuberculate black spots. The four centrals form a square whose anterior side is shorter than the posterior; the hind central eyes are separated by a diameter's interval; the laterals are contiguous, obliquely placed, and very near the extreme outer corner of the caput.
The *falces* are similar in colour to the cephalothorax.
*Maxillæ* pale yellow; *labium* dark brown, with yellowish apex. *Sternum* deep brown, bordered with yellow.
*Abdomen* of a whitish stone-coloured hue, marked with blackish and grey on each side of the fore part and of the hinder extremity as well as on the sides, leaving a rather conspicuous large cruciform white marking on the upperside, with a roundish large black spot on each side of the base of the caudal prominence, and a longitudinal white band on each side. The underside is black. Spinners short, closely grouped and of a dull brownish colour. The genital process is rather prominent and conspicuous, of a reddish-brown colour, with a large transverse oval, characteristic aperture.

*Hab.* PANAMA, Bugaba (*Champion*).

A single example of this very distinct spider was found by Mr. Champion at Bugaba, Chiriqui.

## MAHADIVA, Keyserling.

### **Mahadiva undecim-variolata**, sp. n.

*Adult female*, length 3–$3\frac{1}{2}$ lines, breadth of abdomen 3–4 lines, length of abdomen 2–$2\frac{2}{3}$ lines; length of *adult male* $1\frac{2}{3}$ line.
♀. *Cephalothorax* yellow, the hinder slope deep bistre-brown, the indentations between the caput and thorax marked by stripes of the same colour, of which also there are some other marks on the caput more or less distinct but at times obsolete.
The *eyes* are rather small, subequal; the central group form a square, whose posterior side is shorter than the other three, its eyes being separated by an eye's diameter only. The height of the clypeus is equal to the diameter of one of the fore central eyes.
The *legs* are moderately long, 1, 2, 4, 3, rather slender, yellow. The anterior portion of the femora, the genua, and the extremities of the tibiæ are of a dark bistre-brown, the metatarsi and tarsi also suffused slightly with a similar hue, furnished with hairs and a very few weak spines.
*Falces* strong, rather long, straight, vertical, prominently convex in front.
*Maxillæ* and *labium* deep black-brown tipped with whitish.
*Sternum* deep black-brown.
*Abdomen* large, much broader than long, subtriangular, the fore side somewhat curvitruncate, and the fore corners produced in a sharpish subconical form. On the posterior half are eleven obtusely subconical eminences—nine in three curved rows of three each at the extremities, and one on each side a little in

advance of the anterior row. These eminences are not very large, and do not vary much in size, those of the hinder (or lower) row being the smallest. All have the larger fore part black, with a basal white rim or border, and the rest white. The rest of the upperside is mixed with black and white. Some examples are of a uniform dull cream-white, including the eleven prominences. Others are uniformly and thickly spotted with white on a blackish ground, and have a transverse black band across the fore part; a few have this black band edged with white on the sides, and in the middle two large well-defined round white spots. The sides are suffused with deep blackish-brown; the underside is of the same colour, with a large central dull cream-white area, immediately in front of which is the genital process, which has a slender, sharp, tapering thorn-like process projecting backwards from the middle of its anterior margin. The spinners are dark brown encircled by a black area.

The *male* (the only one I have seen) resembles the paler examples of the female above described; the legs, of course, being much longer in proportion, especially those of the first pair.

In the characters of the tibiæ of the second pair there is a strong resemblance to those of *M. reticulata*; but the furcate prominence in the present species is nearer the posterior extremity of the joint, which is itself also less strong and enlarged, the terminal spines of the fork are also less strong and are of equal length, and those in advance of it are less strong. The anterior legs also in the present species are longer and more slender. The femora of the first two pairs of legs are marked underneath with two longitudinal (incomplete) dark brown lines; the tibiæ and metatarsi of the third and fourth pairs and the metatarsi of the first and second are also marked with a single longitudinal brown line above. The spines on the tibiæ of the first and second pairs are long and tolerably strong. The palpi closely resemble those of *M. reticulata*, but the spines and processes of the palpal organs are far less strong.

This species may easily be distinguished from *M.* (*Epeira*) *verrucosa*, Hentz, by the much smaller and less pointed form of the prominences on the hinder part of the abdomen, and their different relative position, there being in *M. verrucosa* only a single one behind instead of a curved row of three. There are thus only nine instead of eleven as in the present species. There are, however, two others in *M. verrucosa* (one on each side nearly halfway between the anterior prominence and the fore corner of the abdomen), but one of the most noticeable differences from Hentz's spider is the much greater length and strength of the epigyne issuing from the genital process—in *M. verrucosa* this reaches backwards more than halfway to the spinners, and the process itself is of a different structure.

*Hab.* PANAMA, Bugaba (*Champion*).

Several examples of the female and one of the male were found by Mr. Champion at Bugaba, Chiriqui.

### **Mahadiva reticulata,** sp. n.

*Adult male,* length 2 lines, length of abdomen slightly over 1 line, breadth $1\frac{1}{2}$ line.

In general form and characters this species closely resembles *M.* (*Epeira*) *verrucosa*, Hentz, but may easily be distinguished by many well-marked specific characters.

*Cephalothorax* brownish-yellow, marked largely with deep brown on the occiput, along the middle of the thorax, and the normal converging indentations; these latter suffusing more or less the whole sides of the thorax.

*Eyes* of the central group forming a square, whose anterior side is longer than either of the others; the posterior pair are divided by less than an eye's diameter; the anterior pair, which are much the largest, are divided by about, or perhaps less than, half a diameter from each other. Clypeus almost obsolete; lateral eyes oblique, contiguous, and placed on a strongish tubercle.

*Legs* moderately long and strong, those of the first two pairs much the longest and strongest, of pale dull yellowish hue, the femora and tibiæ of the first and second pairs strongly suffused and marked with deep olive-brownish, half the femora of the fourth and a portion of those of the third pairs being similarly suffused, and armed with spines of varied length and strength; the chief spines, in respect to definite position, are a longitudinal row in front of the femora of the first and second pairs, and some longer and stronger ones in a line beneath the tibiæ of the first pair; others, longer but not symmetrically placed, are also on other parts of these joints. The tibiæ of the first pair are long, slightly bent, and a little

incrassated at their fore extremities; those of the second pair are short, a little bent, and considerably enlarged beneath, and at the middle of the enlargement is a strong prominence directed forwards, furcate at its extremity, each prong of the fork ending with a strong articulated spine, the lower one stronger than the upper; in front of this, halfway to the extremity of the joint, is a smaller prominence, similarly terminated, and a strong spine quite at the extremity of the joint. The form and armature of this joint is (there can be little doubt) a character of the male only.

*Falces* rather long, weak, prominent at their base in front, straight, vertical, of a dull pale yellowish colour suffused with dark olive-brownish on the basal half.

*Palpi* short, the palpal bulb of large size; cubital joint very short, but produced in front; radial joint also very short, but produced on each side. The hinder extremity of the digital joint terminates with a strong curved horn-like process, the extremity of which is red-brown, truncated, and directed outward and upwards. The palpal organs are highly developed, very prominent, complex, with corneous processes and spines; one of these, long, curved, and tapering to a blunt point, projects on the outer side, and others project conspicuously at their extremity.

*Maxillæ* and *labium* blackish-brown tipped with pale whitish.

*Sternum* black-brown.

*Abdomen* rather large, broader than long, the upper surface flattened-convex, subtriangular both before and behind, with a small subconical eminence at each lateral fore corner, and some rudimentary tubercular eminences along the hinder margin; these latter are of a whitish-yellow hue, as also is an irregular patch on each side of the median line of the anterior part. The rest of the upperside is spotted or reticulated with black and whitish-yellow, with four unequal spots, of a reddish-yellow-brown, forming a square on the middle. The sides are marked with blackish lines forwards, and the underside has a large, somewhat quadrate, brown patch at its anterior extremity.

*Hab.* Panama, Volcan de Chiriqui (*Champion*).

A single example. This spider may easily be distinguished from *M. verrucosa*, Hentz, by the absence of the strong round tubercular eminences at the hinder half of the abdomen and the much longer legs of that species, besides other differences of colour and markings, and of structure of the palpal organs.

## AMAMRA, gen. nov.

*Cephalothorax* much longer than broad. Caput somewhat drawn out before, and the lateral marginal indentations tolerably strong; the central tubercular prominence, on which the four central eyes are placed, has its face perpendicular (or nearly so) to the clypeus.

*Eyes*, in the main as in *Epeira*, small, the laterals parallel to the lower margins of the caput.

*Falces* moderate in length and strength, vertical, slightly divergent.

*Legs* short, moderately strong, 4, 1, 2, 3, and armed with spines.

*Maxillæ* short, broad, bent, and inclined to the labium.

*Labium* short, subtriangular.

*Abdomen* short-oval, very convex above, bigibbose at its fore extremity on the upperside.

*Sternum* heart-shaped.

### **Amamra bituberosa**, sp. n.

*Adult female*, length $3\frac{1}{4}$ lines.

*Cephalothorax* yellow-brown, clothed rather thickly with greyish-yellow adpressed hairs. Height of clypeus not equal to half that of the facial space, but greater than the diameter of a fore central eye.

*Eyes* small, unequal; the hind centrals are of a dull amber colour, and placed rather on the sides of the posterior portion of the central prominence, which is here more prominent than the anterior portion, the latter being scarcely more prominent than the clypeus. The fore central eyes form a square, whose posterior side is rather longer than either of the others; lateral eyes widely removed from the centrals,

very minute, seated contiguously on a not very strong prominence, and parallel with and not far from the margin of the caput at its anterior corners.

*Falces* similar in colour and clothing to the cephalothorax, convex, but not very prominent in front.

*Legs* short; 1, 2, and 4 subequal, and 3 not very short, if anything 4 longer than 1, of a yellow-brown hue, portions (mostly of 1 and 2) of the femora strongly suffused with deep yellow-brown, clothed with hairs like the cephalothorax. Spines chiefly in two, parallel, rows beneath the tibiæ and metatarsi.

*Palpi* similar to the legs in colour and armature.

*Maxillæ* and *labium* like the cephalothorax in colour, tipped with a pale whitish or grey hue.

*Sternum* dark yellow-brown.

*Abdomen* of a greyish-drab colour, thickly clothed with yellow-grey pubescence, thinly mixed with short dark bristly hairs; the sides have the appearance of numerous slashings or tapering, vertical, greyish-yellow stripes; the anterior upper part of the abdomen has an obtuse gibbosity on each side, with the space between and a little in front of them strongly suffused with deep yellow-brown. Spinners short, tolerably compact, dark yellow-brown. Genital process deep bistre-brown, prominent, strong, somewhat tapering, and directed backwards, obtusely pointed, with a protuberance on each side near the middle.

*Hab.* Costa Rica (*Rogers*).

A single example. This spider appears to have some slight affinity with *Poltys*, Koch, towards which it may perhaps be taken to indicate a passage from *Epeira*.

## KAIRA, gen. nov.

Allied to *Cyrtarachne*.

*Cephalothorax* longer than broad. Thorax broadest behind, narrowing gradually to the lateral constrictions at caput, which are tolerably strong. Thoracic indentation strong and transverse; behind the ocular area a depression or constriction runs over to the lateral constrictions on the margin.

*Eyes* small, in three widely separated groups, on more or less strong tuberculiform prominences. The central group of four eyes forms a small quadrangular figure, and each lateral group is seated at the extreme upper edge of the caput, the eyes of each being distinctly, but not widely, separated from each other.

*Legs*, 1, 2, 4, 3, rather short, those of the first two pairs much the strongest; the inner sides of the tibiæ and metatarsi (which are of a rather bent form) armed with numerous slightly curved spines, of which many on the first and second pairs are closely and regularly set, as though designed for some purpose analogous to that of the calamistrum in some genera of spiders. Tarsi very short.

*Maxillæ* short, bent, somewhat rounded at their extremities.

*Labium* short, subtriangular.

*Sternum* elongate, heart-shaped, or triangular.

*Abdomen* large, semicoriaceous, immensely developed above, and furnished with prominences and tubercular projections.

### **Kaira altiventer,** sp. n.

*Adult female*, length from the clypeus to just above the spinners 5 lines, height of abdomen from spinners to extremity of gibbosity nearly 7 lines, length of cephalothorax slightly over 2 lines, breadth of thorax $1\frac{3}{4}$ line.

The colour of the fore part is dull brownish-yellow, and the cephalothorax is clothed thinly with fine whitish hairs.

The *eyes* are very small, those of the central group equal to each other. The hind centrals are separated from each other by about two diameters' distance, but each is slightly nearer than this to the fore central eye on its side. The anterior side of the central quadrangle is longer than the posterior. The height of the clypeus is slightly less than half that of the facial space.

*Falces* moderate in length and strength, straight, vertical, rounded but not very prominent in front.

*Abdomen* very large and high, and projecting greatly over the thorax; on each side of the upper extremity is a strong eminence (the termination pointing inwards) covered with many small blunt subconical prominences.

It is of a dull whitish-yellow, tinged with yellow-brown and marked in front and on the sides with some irregular rather darker lines. The spinners are short and compact. The genital process is very small and has a minute sharp recurved point.

*Hab.* PANAMA, Veragua (*Boucard*).

A single example.

**Kaira gibberosa,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines, height of abdomen $3\frac{1}{2}$ lines.

*Cephalothorax* of a whitish colour, irregularly streaked with dull brownish-yellow. Height of clypeus distinctly less than half that of the facial space.

*Eyes* of central group forming very nearly a square, whose anterior side is very slightly longer than the posterior side; the hinder eyes of this group are slightly larger than the fore ones.

*Legs* short, 1, 2, 4, 3, and armed as in *K. altiventer*. They are yellow, marked in parts with whitish; the fore extremities of the femora are deep brown, and the tibiæ, tarsi, and metatarsi are faintly annulated with yellow-brown. The femora also of the first pair are armed with some spines, of which, however, the bases only remained in the specimen examined.

The *falces* are short, moderately strong, and similar to the cephalothorax in colour.

*Maxillæ* and *labium* brown, tipped with a pale hue.

*Sternum* of a still darker brown.

*Abdomen* continuously elevated on the upperside in a subconical form, ending in a large, somewhat wrinkled, subcylindrical eminence, the extremity of which is bifid or has a subconical prominence on each side; on the fore part of this eminence, as well as on the sides and lower hinder part of the abdomen, are some small subconical tubercles or prominences—two of these, one on each side of the median line, a little way above the spinners, are larger and more conspicuous than the rest. The colour of the abdomen is yellowish-white mixed with yellow-brown, and obscurely marked in parts with blackish; on only one part is any pattern visible, and that is on the hinder portion, where a large triangle is delineated by black lines just above the two tubercular prominences above mentioned. The spinners are very short, compact, and of a deep brown colour. The genital process is exceedingly small and inconspicuous but characteristic.

*Hab.* PANAMA, Veragua (*Boucard*).

A single example.

## EDRICUS, gen. nov.

*Cephalothorax* longer than broad, narrow behind, gradually widening to the caput, and narrowing again forwards; caput produced forwards.

*Eyes* unequal in size, on strong tubercular prominences. The four centrals are seated on a very large prominence, the posterior ones the largest; those of each lateral pair are contiguous to each other, on a strong projecting tubercle on the sides of the caput, and removed backwards beyond the straight line of the hind central eyes.

*Legs* long and slender, 1, 4, 2, 3, or 4, 1, 2, 3, devoid of spines, excepting in the male, in which the tibiæ of the second pair are short, enlarged, and have a strong sharp spine at the fore extremity on the inner side.

*Falces* rather long, not very strong, and inclined backwards toward the sternum.

*Maxillæ* short, bent towards the labium, which is also short, and rounded at its apex.

*Sternum* deeply indented on the lateral margins to receive the legs, which have the appearance of being inserted into its surface, especially those of the third pair, the basal joints of the fourth pair being contiguous.

*Abdomen* long, cylindrical, produced over the spinners and armed with spines. This genus shows some affinity with *Acrosoma*.

### **Edricus spinigerus,** sp. n.

*Adult male*, length 3 lines, length of cephalothorax $1\frac{1}{4}$ line.

*Cephalothorax* rather flat, the surface granulose, and of a deep rich reddish-brown colour, thinly clothed with short white coarse hairs. The normal grooves and indentations shallow and slightly marked. The height of the clypeus, which is very retreating, about equal to half that of the facial space.

The hinder *eyes* of the central group are large, and separated from each other by about two diameters, and seated one on each side of the hinder part of the central prominence; the anterior eyes are small, nearer together on the lower part of the front of the prominence. The laterals are smallest, and seated obliquely and contiguously on a prominence.

*Legs* brown, clothed with hairs; the basal half of the metatarsi paler, and the tibiæ darker than the rest; the tibiæ often incrassated, and armed with a strong sharp spine near the fore extremity and rather on the inner side.

*Palpi* very short, the radial joint obtusely produced on the outer side. The cubital joint has a longish, prominent, tapering, filiform, pointed, curved bristle on its fore side; palpal bulb roundish, and not very large; palpal organs prominent, highly developed and complex, with spines and corneous processes.

*Falces*, *maxillæ*, *labium*, and *sternum* deep brown.

*Abdomen* long, cylindrical, its margins a little sinuous; its hinder part is produced beyond the spinners, and is a little elevated, enlarged, and rounded at its extremity, on the upperside of which there are three sharp, conical, spine-like prominences, describing a triangle whose base is towards the thorax; at the anterior extremity of the abdomen are four spines, the two foremost, on one side, long, tapering, and sharp, and a little way behind each is a very small one, with a still more rudimentary one between each and the posterior extremity. The abdomen is black in colour, marked on the upperside with a pale yellowish slightly angulated line along its whole length on each side, touching the spines above mentioned; along the centre also are some other indistinct pale lines and markings, and between the spinners and the apex of the triangle, formed by the three hinder spines, is a large pale yellow-brown kite-shaped marking. The spinners are very short and compact, and on each side of the under surface, in the middle, between them and the fore extremity, is a short yellow stripe or elongated spot.

*Hab.* PANAMA, Bugaba (*Champion*).

A single example.

## KEYSERLINGIA, gen. nov.

Allied to *Edricus*, but easily distinguished by the lateral eyes being separated from each other by nearly two diameters' interval; the tubercles, also, on which they are seated are less prominent. The central eyes are as in *Edricus*, as also is the form of the cephalothorax.

*Legs*, 4, 1, 2, 3, short, devoid of spines, the femora of the first and second pairs the strongest and slightly tuberculose.

*Sternum* as in *Edricus*; the basal joints of the posterior pair of legs are articulated into a distinctly raised kind of socket-joint, and nearly contiguous to each other at the hinder extremity of the sternum, which is covered over by the somewhat produced thorax with a sort of shield, which also covers the pedicle connecting it with the abdomen.

*Abdomen* broadest behind, where it is produced into a blunt caudiform prolongation.

*Spinners* small, compact, and seated at the end of a sheath-like circular prominence, like that of *Gasteracantha* and others.

### **Keyserlingia cornigera,** sp. n.

*Adult male*, length $2\frac{1}{4}$ lines.

*Cephalothorax* glossy, of a yellowish-brown colour, obscurely marked along the normal indentations with a deeper hue; the slope from the hinder extremity to the ocular area is gradual and uniform, but not great. The height of the clypeus is about half that of the facial space.

The *eyes* are on black tuberculate spots; those of the central group (of four eyes) form a square whose

anterior side is the shortest. The hind-centrals are the largest of the eight. The fore laterals with the hind centrals form a straight transverse line over the caput.

The *falces* are short, moderately strong, roundly prominent in front, inclined a little towards the sternum, and similar in colour to the cephalothorax, as are also the maxillæ and labium.

The *sternum* is rather darker than those parts, and is transversely rugulose.

The *legs* are of a dull greenish-yellow-brown colour; the femora of the first two pairs are the darkest, and somewhat tuberculose on the surface; they are furnished with hairs only.

The *palpi* are short, similar to the legs in colour. The palpal bulb is rather large. The radial joint is dilated in front, obtusely prominent on the outer side, and has a short, sharp, spine-like prominence at the fore extremity on the inner side, and from immediately underneath its anterior extremity on the upperside, and close to the base of the digital joint, issues a long, strong, curved, tapering, but obtusely pointed horn-like spine, directed backwards, while its point is directed forwards (I found it very difficult to see the exact origin of this horn-like spine, whether it is connected with the radial or digital joint or with the palpal organs, but I think it issues from the inside of the radial joint). The digital joints are of irregular form. The palpal organs are large, prominent, and not very complex, consisting chiefly of a large corneous lobe, which is drawn out into two or more coincident processes at its extremity, directed outwards, and has a small, curved, prominent, slightly tapering spine, pointing outwards beneath its basal portion.

The *abdomen* is of a triangular form, widening gradually from its fore extremity, but its hinder part is produced into a short, blunt, caudal prominence, giving the whole a somewhat diamond shape. It is of a dull leaden-brown hue, the upperside thickly marked with white and yellowish, and with a brown subtriangular pattern, corresponding nearly to the form of the abdomen, this portion being very glossy. The sides are somewhat longitudinally rugulose. The anterior portion of the underside is covered with a coriaceous, oblong, granulose, slightly reddish-brown cuticle, forming at its extremity a circular collar, into which the pedicle connecting the abdomen and cephalothorax is inserted. The spinners are very short, inserted at the extremity of a kind of coriaceous, prominent, deep-brown sheath of a truncated cone-shape.

*Hab.* Panama, Bugaba (*Champion*).

A single example.

## CYRTARACHNE, Thorell.

### **Cyrtarachne decem-tuberculata,** sp. n.

*Adult male*, length 2 lines.

*Cephalothorax* of a deep black-bistre-brown, covered with minute tubercles or granulosities, from which spring short spine-like black bristles, mixed with greyish hairs; the hinder part of the thorax has a yellowish longitudinal band, with a deep brown stripe along the middle.

*Eyes* large. Those of the central group are much the largest, and describe a square whose anterior side is rather the longest; the posterior pair are separated by an eye's diameter; those of the anterior pair (which are the largest) also appear to be divided by a similar interval. The height of the clypeus equals the diameter of one of the fore central eyes. The lateral eyes are on the extreme outer sides of the caput, contiguous, and seated on a strong tubercle.

The *falces* are rather long, not very strong, straight, deep brown, paler at the base and extremities.

*Legs* rather short, tolerably strong, devoid of spines, 1, 2, 4, 3, similar in colour to the cephalothorax, annulated rather distinctly with yellow and dull orange. The tibiæ are rather bent, and enlarged at their anterior extremities, and all the femora are covered with strongish tubercular prominences of various sizes.

*Palpi* very short, similar to the legs in colour; palpal bulb large, nearly globular. Palpal organs large, prominent, and tolerably complex, with corneous lobes and processes.

*Maxillæ* and *labium* deep black-brown tipped with greyish.

*Sternum* deep bistre-brown, with a dull orange-brown oval marking towards the fore part, and some similarly coloured marginal spots.

*Abdomen* large, triangular, projecting greatly over the thorax, where it is most massive. It is of a dull leaden-black hue, its surface pretty thickly covered with small red-brown tubercles or granulosities, from whence issue small spinous bristles; there are also ten red-brown gibbosities of different sizes, somewhat subconical in form and similarly granulose, distributed over the abdomen, six (three on each side) on the upper part and four on the posterior slope—the intermediate one on each side is the largest, and is bifid at its extremity, the lower pair on the posterior slope (which is almost perpendicular) being the smallest. There are some small indistinct whitish markings along the median line of the upper part and posterior slope, and an oblong yellowish patch from the spinners to the lowest pair of gibbosities.

*Hab.* PANAMA, Bugaba (*Champion*).

A single example only of this very distinct species has been received.

## ACROSOMA, Perty.

### **Acrosoma furcula,** sp. n.

*Adult female*, length 5 lines, length of the abdomen nearly 4 lines.

*Cephalothorax* glossy, reddish-brown, clothed with whitish silky hairs especially on the sides and hinder part. Thorax more convex than the caput. Normal grooves and indentations very slight, excepting the thoracic indentation, which is circular and deep.

*Eyes* of the central group forming a square.

The *legs* are short, 4, 1, 2, 3, slender, clothed with hairs, but without spines, and of a yellow-brown colour.

*Maxillæ* and *labium* deep blackish-brown, with the extremities and apex pale.

*Sternum* deep bistre-brown, heart-shaped, transversely impressed, and with small marginal eminences.

*Abdomen* projecting over the whole thorax: it is of a somewhat oblong-oval shape, truncate before, and with its posterior extremity produced in a caudal form, the produced part ending in a strong fork, or two lobes, each of which terminates with a small spiny point. The upper surface is glossy, of a yellow or orange colour, pretty thickly covered with transverse curved rows of bright rusty-red cicatricose spots of various sizes, some of which have deep red or blackish centres, and there is a dusky central longitudinal line towards the hinder end. The sides are strongly rugulose, and with the under surface are yellowish-brown, a little mixed with yellow. In some examples the upperside of the abdomen has some short black transverse lines on the outer (lateral) margins, these lines being connected with the red spots nearest the margin. The abdomen is thinly clothed with fine pale silky hairs. The spinners are about one-third of the distance from the fore end, on a strong, subconical, obliquely truncated prominence. The genital process is prominent and characteristic in form.

*Hab.* GUATEMALA, Dolores, Menché on the River Usumacinta, and between Dolores and Chapallal (*Sarg*).

In his notes, Mr. Sarg speaks of the abdominal spots as being of an "intense scarlet"; in other respects the colours do not appear to have been much affected by preservation in spirit.

### **Acrosoma parallelum,** sp. n.

*Adult male*, length $2\frac{1}{3}$ lines, length of the abdomen rather over $1\frac{1}{2}$ line.

Of a flattened form. The cephalothorax and abdomen extending in the same plane, and their upper surface on the same level. The colour of the former is brownish-yellow, with a broad lateral band of darker yellow-brown on each side. The sides of the thorax are thickly marked with impressed points or punctures.

The *eyes* are normal, seated on slight tubercles. The four centrals form a small square group. Clypeus narrow and retreating.

*Falces* small and directed backwards.

*Legs* rather short and slender, 4, 1, 2, 3, furnished with hairs and fine spines; of the latter there are two

longitudinal parallel rows beneath the tibiæ of the first and second pairs. The colour of the legs is yellow-brown, the femora rather the darkest.

The *palpi* are short, pale brownish-yellow. The digital joint is darker, and has its hinder extremity produced into a curved horn-like somewhat obtusely pointed prominence directed outwards. The palpal bulb is of fair size; the palpal organs are prominent and well developed, with processes whose points project at the fore end.

The *sternum* is small, of a rather narrow-oval shape; the legs are articulated on its sides and in the same plane, the articulations being covered in a shield-like form by the projecting margins of the thorax.

The *abdomen* is about double the length of the cephalothorax, and narrow; the hinder extremity truncate in a slightly curved form; the sides are nearly parallel, being very slightly curved, the convexity of the curve directed outwards; the fore end fits up close upon and over the thorax. It is of a dull luteous-yellowish hue above, with an incomplete blackish marginal band on each side, whose outer edge is white. The hinder extremity has a blackish, more or less diffused spot or patch above. The underside is yellow-brown, more or less suffused with blackish; at the posterior extremity is a somewhat conical prominent point on each side, above which are two transverse rugæ. The spinners, which are short, compact, and but little prominent, are placed more than one-third of the distance from these rugæ to the anterior extremity of the abdomen.

*Hab.* PANAMA, Bugaba (*Champion*).

Several examples.

## **Acrosoma longicauda,** sp. n.

*Adult male*, length $2\frac{1}{3}$ lines, length of the abdomen $1\frac{2}{3}$, that of the portion beyond the spinners $1\frac{1}{4}$ line.

The *cephalothorax* is of a yellow-brown colour, and its surface is granulose and thinly clothed with short hairs. The normal grooves and indentations are fairly defined, and the posterior margin is a little turned up.

The *eyes* of the central group form a square.

The *legs* are short, 4, 1, 2, 3, of a brownish-yellow colour, the femora of the first three pairs being of the same hue as the cephalothorax. They are furnished with short hairs but are destitute of spines, and the undersides of the femora are slightly granulose.

The *palpi* are short, the palpal bulb rather large. The digital joint has its hinder extremity produced into a strong, curved, bifid, obtusely pointed prominence directed outwards; the palpal organs are highly developed, and have several prominent corneous lobes and processes.

The *sternum* is elongate-oval or somewhat subtriangular, convex, and granulose, similar in colour to the cephalothorax.

The *abdomen* is narrow, oval, truncated before, and fixed to the cephalothorax by a short pedicle. Its hinder extremity is produced into a long caudiform prolongation, whose posterior portion is segmented, or at any rate has the appearance of it from two strong transverse constrictions, the hinder edges of each of which overlap the next segment. The extreme end is rather dilated and truncate, with four subconical prominences, one at each corner. (I suspect that the segments noted above are so far real segments that the caudal portion can be elevated or depressed, like a true tail. They are probably an extreme development of the transverse rugæ, observable very distinctly in some, and slightly in most, spiders at the extremity of the abdomen—to speak more correctly, they are perhaps a reversal to, or may be the survival of, an original segmented condition common to the far off progenitors of the Araneidea.) The whole upper surface of the abdomen is coriaceous, finely granulose, and covered with short hairs; it is of a pale yellow-brown colour, obscurely marked on the upperside and also along the underside (this part being granulose) with blackish; on the upperside near the middle are two pairs of reddish-brown oval spots, margined narrowly with yellowish, and forming an oblong figure, the posterior pair being much the largest. The sides of the abdomen are longitudinally rugulose. The spinners are in a strong sheath-like prominence, and placed scarcely more than one-fourth of the way from the fore extremity towards the hinder part of the caudal prolongation.

*Hab.* PANAMA, Bugaba (*Champion*).

This remarkable spider may easily be distinguished by its long, narrow, caudiform abdomen.

## **Acrosoma calcaratum,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines, length of the abdomen $1\frac{1}{2}$ line.

The *cephalothorax* is of a deep bistre-brown colour, very glossy. The normal grooves and indentations are slight, the central portion of the ocular region is rather produced forwards, and the posterior margin is truncated and curved upwards.

The *eyes* of the central group form a quadrangular figure whose posterior side is rather longer than the anterior.

The *legs* are slender, moderately long, 4, 1, 2, 3. The fore sides of the femora of the first, second, and fourth pairs are granulose; the third and fourth pairs are dark yellowish-brown; the femora of the first and second pairs, as well as the undersides of the tibiæ and metatarsi, are similar in colour to the cephalothorax, the other portions being yellowish-brown. They are furnished with hairs, but are destitute of spines.

The *palpi* are short, the palpal bulb large. The digital joint has a short, curved, obtusely pointed process at its base on the outer side. The palpal organs are very prominent and highly developed; two long, strong, contiguous, corneous processes extend from their fore extremity rather backwards, and at their base on the outer side there projects a spiny process, one of whose limbs forms a longish, curved, horn-like, not very sharp pointed spine. There are also other spines and processes connected with these organs.

The *sternum* is of a subtriangular form and granulose, with marginal eminences near the articulation and a strong transverse impression near the hinder extremity of the legs (in respect to the articulation of the latter there is the same peculiarity in *A. parallelum* and other species).

The *abdomen* is articulated to the thorax by a short but distinct pedicle; it is half as long again as the cephalothorax, narrow (equal to the width of the hinder part of the thorax) in front, and enlarging gradually to rather more than double the breadth at its hinder extremity, which is deeply indented—it is thus of an elongate-triangular form. The upperside is black and glossy, with narrow yellowish-white lateral and posterior margins; in the centre is a dull yellowish, suffused, slightly tuberculose spot, and midway between it and the hinder margin are two larger, round, yellowish-white, well-defined tubercular spots near together, but not contiguous, in a transverse line. The lateral margins of the abdomen are somewhat sinuous, indicating suppressed eminences, which in the female may very probably be represented by distinct prominences or spines; each corner of the hinder extremity has a group of several small tubercular prominences. The spinners are in a strong, prominent, sheath-like prominence, and situated about one third of the way from the hinder extremity towards the fore end. The underside is dark yellow-brown and strongly rugulose.

*Hab.* PANAMA, Bugaba (*Champion*).

A very distinct species.

## **Acrosoma brevipes,** sp. n.

*Adult male*, length $1\frac{1}{3}$–2 lines, length of the abdomen 1–$1\frac{1}{3}$ line.

This spider may easily be distinguished from *A. parallelum* by the dark olive-brown, uniformly glossy cephalothorax; the shorter and more slender legs, which are devoid of spines; the abdomen much less flattened in form, and narrower before, and enlarging gradually to the posterior extremity, where it is bluff and truncated; and the spinners prominent and placed nearly midway between the fore end and the hinder part.

The *legs* are 4, 1, 2, 3, dull yellowish-brown behind, but much darker in front.

The *palpi* are somewhat similar in general structure and appearance to those of *A. parallelum*, but the palpal bulb is rather smaller; the production at the base of the digital joint has its end strongly hooked, with a prominent though bluntish point behind the crook, giving it a bifid appearance. The radial joint is also bifid at its anterior extremity, being produced into two sharp corneous points. The palpal organs have

several strong corneous processes, one of which projects at their fore end, and is enlarged and truncated at its extremity.

The *sternum* is dark black-brown, and its surface is marked with some converging grooves and furrows.

The *abdomen* is joined to the thorax by a short but distinct pedicle; its breadth at the fore end is equal to that of the base of the thorax, but it enlarges gradually to at least double that breadth at the hinder end; it has a rudimentary prominence at each fore corner, two on each lateral margin, and one at each hinder corner. These prominences are black, and give the margins of the upperside a sinuous appearance. The upper surface is glossy, and varies from dark yellowish-brown to blackish; about the middle is a white spot followed towards the hinder extremity by two others, larger and close together in a transverse line; the sides and posterior extremity beneath are rugulose, of a yellowish-brown colour marked with vertical rows of whitish spots. The underside varies from yellowish-brown to black-brown.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Acrosoma vitiosum,** sp. n.

*Adult male*, length $1\frac{2}{3}$–2 lines.

*Cephalothorax* of a more than usually regular oval form, its colour deep pitchy-brown; the normal grooves and indentations obsolete, excepting a small indentation at the thoracic junction. The surface is covered closely with fine striæ.

The *eyes* of the central group form a quadrangular figure, longer than broad, its anterior side rather shorter than the posterior.

The *legs* are rather short, 4, 1, 2, 3. The femora and tibiæ of the first and second pairs are considerably stronger than the rest; they are furnished with hairs and spines, the latter weak and not very conspicuous; colour yellow-brown, deepening into blackish-brown on the femora.

The *palpi* are short and similar to the legs in colour. The palpal bulb is rather large. The digital joint has two subconical prominences, one at its base, the other near the middle; the radial joint is very short but prominent, both on its inner and outer sides. The palpal organs are very prominent, with several bold lobes and corneous processes.

The *sternum* is small, oval, and black, and has the legs articulated to it as in *A. parallelum*.

*Abdomen* rather longer than the cephalothorax, to which it is joined by a very short pedicle; narrow in front, and enlarging gradually to its hinder extremity, which is roundly truncate; it has a short-pointed prominence on each lateral margin nearer to the hinder than to the fore extremity, and another at each corner of the hinder extremity. Its colour is black, with a narrow anterior margin of yellowish-white, several irregular ochre-coloured spots or patches along each lateral margin, and a largish oblong-oval, transverse, convex, somewhat tuberculose spot of pale cream-colour near the middle of the upperside, and in front of this are three very minute points or prominences in a transverse line across the abdomen. The spinners are prominent and situated a little way from the posterior extremity.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is allied to *A. brevipes*, but may easily be distinguished by its darker hues and the stronger anterior legs (which latter are not spinose in *A. brevipes*), as well as by its markings and the very different structure of the palpi and palpal organs.

## **Acrosoma 12-spinosum,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines, length of the abdomen $1\frac{2}{3}$ line.

*Cephalothorax* longer than broad; thorax considerably gibbous just behind the thoracic junction, and perceptibly raised above the level of the caput; colour dull yellowish, with a broad longitudinal band of dusky brown on each side.

*Eyes* of the central group forming a square whose posterior side is slightly shorter than the others. The posterior eyes of this group are much larger than the others, which, with the laterals, are very small.

*Legs* 4, 1, 2, 3, slender; similar in colour to the cephalothorax, furnished with hairs, and on the tibiæ of the first pair are a few very fine spine-like bristles. All the femoral joints are finely granulose.

*Abdomen* somewhat quadrate, longer than broad, or, at least, its width at the posterior extremity, exclusive of the prongs of the two hinder corners, almost equal to its length. The anterior extremity is concave to admit the thorax, and is nearly equal in width to the cephalothorax, and each of its corners is prolonged into a sharp tapering spine of no great length, directed forwards in the same plane as the level upper surface of the abdomen; each hinder corner is produced into a considerable and strongly divergent prominence directed obliquely outwards and upwards, the extremity of which is trifid—the central limb largest, and the inferior one, which is directed rather downwards, smallest, each limb tapering, corneous, and ending with a dark spiny point; on each lateral margin of the abdomen in advance of the hinder prominence are two small slightly curved spines in a longitudinal line, the anterior one on each side being nearly halfway between the fore and hind corners. The abdomen is of a cream-yellow colour, margined laterally with dusky brownish, and has a double row of dark impressed spots on each lateral margin, and six larger reddish-brown ones in three pairs in the median line of the fore part of the upperside; the posterior part, which is of a triangular form, is also cream-yellow, marked with four longitudinal rows of small impressed dark points; the sides are longitudinally rugulose, dark brown, with two or more yellow spots along each rugulosity. The spinners are in the usual, almost circular sheath-like prominence. Underside dull olive-greenish-yellow-brown; genital prominence strong and of characteristic form.

The *falces*, *maxillæ*, *labium*, and *sternum* are similar in colour to the cephalothorax.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Acrosoma fericulum,** sp. n.

*Adult female*, length slightly over $1\frac{1}{2}$ line, length of the abdomen 1 line.

*Cephalothorax* dull yellowish-brown, less flattened, or rather more regularly curved than in some other species of the genus; normal grooves and indentations slightly marked.

*Eyes* of the central group on black spots, forming a square whose anterior side is shorter than the others.

*Legs* short and slender, 4, 1, 2, 3, of a yellow-brown colour, some of the joints partially or wholly suffused or marked with dark brown and blackish.

*Sternum* convex, heart-shaped, deep bistre-brown, and devoid of lateral eminences.

*Abdomen* large, double the length of the cephalothorax, and attached to it by a short pedicle. It is of a somewhat subtriangular form, bluff and rounded behind. On the upperside on the lateral margin are three pairs of sharp, slightly curved, outwardly directed, thorn-like spines, these being continuations of the abdominal prominences; the anterior pair of spines are a short distance behind the fore extremity, the middle pair rather nearer the hinder than to the anterior pair, the hinder pair a little way from the posterior extremity and rather shorter than the others, which are of nearly equal size, the middle pair being perhaps the longest. On each side of the rounded posterior part of the abdomen is another short spine. The abdomen is of a yellow-brown hue, marked above with some small round, reddish, cicatricose spots, and three whitish-yellow tubercular spots in the form of a triangle about the middle, the largest spot (the apex of the triangle) in front; the spines are black; and there is a whitish longitudinal stripe behind each of the three pairs of prominences. The sides are rugulose and marked with two vertical dull yellowish stripes. Spinners very prominent, at the extremity of a large subconical sheath-like eminence, a little way behind the middle of the underside. Genital aperture not very conspicuous, but of characteristic form.

*Hab.* GUATEMALA, Menché, Yzabal (*Sarg*); PANAMA, Bugaba (*Champion*).

The above description is chiefly taken from the Bugaba specimens. In Mr. Sarg's collection there is an example from Menché, and another from Yzabal, both immature males; these have the three larger pairs of spines on the abdomen rather straighter, and the fourth pair obsolete.

## SADALA, Simon.

(*Sparassus*, Keyserling, partim.)

This genus is nearly allied to *Sparassus*, *Olios*, and *Sarotes*. It was formed for various South-American species by Mons. Simon in 1880, in his "Révision de la Famille des Sparassidæ" (Actes de la Soc. Linn. de Bordeaux, xxxiv. p. 317); but whether the slight differences given between *Sadala* and those genera are sufficient to justify the formation of a separate genus seems doubtful. The specimen from which the species below is described has been kindly examined by M. Simon, and by him referred to *Sadala*.

### **Sadala simonii,** sp. n.

*Adult female*, length very nearly 12 lines.

The *cephalothorax* is very slightly longer than broad; profile strongly and evenly convex; lateral marginal indentations at the junction of the caput and thorax very slight; broad and obtuse at the anterior margin; height of the clypeus equal to the diameter of one of the anterior central eyes. The colour of the cephalothorax and legs is reddish-orange; the latter having the fore extremity of the femora, and nearly the whole of the metatarsi, and a slight suffusion beneath the hinder extremity of the tibiæ, blackish-red-brown, the tarsi having a very broad central dark band; while the metatarsi are clothed with deep orange-yellow hairs towards the margin, and divided longitudinally by a strong blackish line or narrow stripe; the sides of the caput, along the junctional line with the thorax, also suffused with brownish, and a black line, broken by the fore central pair of eyes, runs round the anterior margin. The upper surface of the cephalothorax is thinly covered with pale hairs.

The *eyes* are all of a pale amber colour and are in two nearly concentric curved rows, the posterior row being rather the most strongly curved, the convexity of the curve directed backwards. The central pair of the anterior row are the largest of the eight, and are rather nearer to each other than to the laterals on either side. Those of the posterior row are smallest, about equal in size, and the central pair are distinctly (rather considerably) nearer to each other than to the laterals respectively. The four central eyes form a trapezoid whose anterior side is distinctly the shortest; the eyes forming the anterior side are separated from each other by a little less than a diameter's interval, and from those of the posterior side by a rather greater distance.

The *legs* are long and tolerably strong, 2, 1, 4, 3, armed with strongish but not numerous spines, and clothed thinly with fine hairs; the tarsi and metatarsi are furnished with a rather dense broad scopula throughout, and with claw-tufts; the underside of the two basal joints of the legs are dark coloured, like the labium. (Their colour in other respects has been noted above.)

The *palpi* are similar in colour to the legs; the radial and digital joints being thickly clothed with short dark hairs.

The *falces* are powerful, vertical, prominent at their base in front, and of a rich deep black-brown hue.

The *maxillæ* are of tolerable length, rather inclined to the labium, rounded and enlarged at their extremities, which are pale, clothed with coarse reddish hairs, the remainder being deep red-brown.

The *labium* is almost quadrate, the corners of the apex being slightly rounded off; its colour is rather darker than that of the maxillæ.

The *sternum* is heart-shaped, and of a deep blackish-red-brown colour.

The *abdomen* is large, oval, and considerably convex above; it is of a reddish-buff colour, fairly clothed with short fine hairs, some of which are of a brownish hue. The underside is brown-black, and on each side rather beneath the fore extremity is a dark diffused patch. The spinners are short and compact. The form of the genital aperture, which is, however, not of large size, is characteristic, but simple.

*Hab.* GUATEMALA, Salinas de Nueve Cerros (*Sarg*).

Mr. Sarg has the following note upon this spider: "Whilst clearing for camp towards

evening this remarkably handsome spider was observed running away on the ground. Two Indians who took it up successively as quickly dropped it on receiving sharp bites; it was most active and pugnacious, but was finally secured by Mr. Reutter. The bitten men complained of severe itching for hours afterwards."

The colour of the abdomen is described by Mr. Sarg as "deep red-orange furred with hairs of cadmium-yellow," and the underside "a shade of chocolate and purple madder." These richer colours therefore have now subsided into the plainer ones described above from the preserved specimen.

### **Sadala fugiens,** sp. n.

*Adult male,* length 6 lines.

The *cephalothorax* is a little longer than broad; caput broad, slightly curvo-truncate anteriorly, the lateral marginal compression rather strong; profile curvo-convex; colour dull orange-yellow, the caput, especially its sides along the junction with the thorax, strongly suffused with brown; the other normal indentations are also marked with dusky brown. The height of the clypeus is rather less than the diameter of one of the fore central eyes.

The *eyes* are in two as nearly as possible straight lines, though if looked at in some positions the lines might be described as slightly curved, the convexity of the curves directed backwards, and the anterior row more curved than the posterior. The two central eyes of the anterior row are scarcely, if at all, larger than the laterals; those of the posterior row are smallest, and of equal size. The interval between the hind central pair is distinctly less than that between each and the lateral next to it. The eyes of the anterior row are equidistant from each other. The four central eyes form a square whose anterior side is rather the shortest.

The *legs* are long, moderately strong, 2, 1, 4, 3. Their colour is orange-red-brown, the tarsi and metatarsi of a deeper hue, and furnished with a broad scopula and claw-tuft. Spines moderately long and strong.

The *palpi* are of moderate length; the cubital joint is short, but a little longer than broad; the radial joint is just double the length of the cubital, slightly enlarging towards the fore extremity, which ends on the outer side with a small tapering, not very sharp-pointed apophysis, no longer than the width of the hinder extremity of the joint. The digital joint is long, narrow-oval, longer than the radial and cubital joints together, and of a dark brown hue, thickly clothed with hairs, the rest of the palpus being similar in colour to the legs. Palpal organs simple.

The *falces* are powerful, straight, not very convex in profile, of a deep rich red-brown colour, clothed with coarse pale hairs and bristles.

The *maxillæ* are strong, straight, enlarged and rounded at the extremity, slightly inclined to the labium, of the same colour as the falces, and furnished with a tuft of coarse reddish hairs at the extremity on the inner side.

The *labium* is nearly square, rather rounded at the apex, and about the length of the maxillæ, which it resembles in colour.

The *sternum* is heart-shaped, pale yellow, similar in colour to the basal joints of the legs.

The *abdomen* is oval, broadest in front, of a yellow-brown colour, clothed with pale hairs. The normal marking on the fore half of the upperside (corresponding to the dorsal vessel) is indicated by dark brownish broken marks and lines, followed on the hinder half by an indistinct longitudinal series of reddish-brown united angular markings or chevrons, which reach to the spinners; these are short and compact, and from them to the spiracular plates extends a broad deep blackish-brown central band which widens as it runs forwards, and becomes of an elongate lyre-shape. The sides are marked with oblique dark irregular lines.

*Hab.* GUATEMALA, Montaña de Cahabon (*Sarg*).

Mons. Simon has kindly examined the specimen above described, and determines it

to be of his genus *Sadala*, the characters of which, however, as given by him (*l. c. anteà*) would seem to need revision in order to include it.

## VINDULLUS, Simon.

Formed for a spider from Brazil, nearly allied to *Sparassus*, by Mons. Simon (Actes de la Soc. Linn. de Bordeaux, xxxiv. p. 288). The specimen from which a new species has been described below has been examined by M. Simon, and determined to be of this genus.

### **Vindullus similis,** sp. n.

*Adult female*, length rather over $4\frac{1}{2}$ lines.

This spider (in the cabinet specimen) is of a uniform yellow, the abdomen being paler than the rest, and clothed with pale hairs.

The *cephalothorax* is distinctly longer than broad; profile rather flattened convex. Caput moderately broad, and rather roundly truncated anteriorly on the upper margin; the height of the clypeus is equal to the diameter of one of the fore central eyes, and the lateral marginal indentation of the caput is tolerably strong.

The *eyes* are small, pale brownish coloured. Those of the fore central pair are slightly the largest. The anterior row is straight, though it looks curved in some positions owing to the curvature of the fore margin of the caput; its eyes are equidistant from each other. The posterior row is longest and very slightly curved, the convexity of the curve directed forwards; the interval between the central pair of this row is distinctly, in fact considerably, greater than that between each and the lateral eye next to it of the same row. (In M. Simon's characters of the genus the eyes of the posterior row are stated to be equidistant from each other, and the four centrals to form a square, whereas in this species they form a trapezoid or square, whose posterior side is distinctly longer than the other three sides, which are equal.)

The *legs* are very slender, 2, 1, 4, 3; on the upper side of the fore half of the metatarsi and throughout the tarsi are two parallel red-brown, not very distinct, longitudinal lines. They are furnished with rather long pale hairs, a thin scopula, and claw-tuft. The spines are long, tolerably strong, sessile, and of a brownish-red hue; the most conspicuous are beneath the tibiæ and metatarsi—three pairs in two parallel rows under the tibiæ, and two pairs under the metatarsi, the latter being the longest and strongest.

The *palpi* are similar in colour and armature to the legs.

The *maxillæ* are moderately long, enlarged and rounded at the extremity, and slightly inclined to the *labium*, which is about equal in length and breadth, but rather widened and rounded at the apex.

The *falces* are moderately strong, vertical, and straight, their profile not greatly convex.

The *abdomen* is of moderate size, rather roundly truncated anteriorly, and somewhat tapering to the spinners, which are short and compact. The form of the genital aperture is simple but characteristic.

*Hab.* GUATEMALA, Chisec (*Sarg*).

Mr. Sarg says that when caught this spider was of a bright green hue.

## OLIOS, Walckenaer (partim).

### **Olios erroneus,** sp. n.

*Adult female*, length 7-$7\frac{1}{2}$ lines.

The whole of the fore part of this spider, except the falces, is of an orange-yellow colour, and the abdomen is of a paler, more clayey hue. The underside of the abdomen has a broad longitudinal dusky-blackish band with a pale margin. The falces are deep reddish-brown.

The *cephalothorax* is longer than broad; profile flattishly curved.

The *eyes* are small, those of the fore central pair rather the largest; the two rows are straight, though (for the same reasons given in respect to *O. manifestus*) apparently curved; those of each row respectively are equidistant from each other. The four centrals describe a square whose anterior side is slightly, but perceptibly, shorter than the other sides. The height of the clypeus is equal to the diameter of a fore central eye.

The *legs*, 2, 1, 4, 3, are long and tolerably strong; they are clothed with rather long pale hairs, also, but not thickly, with long slender spines; and there is a dense, very broad, pad-like, dark mouse-brown scopula beneath the tarsi and metatarsi, with claw-tuft. The scopula gives a broad dark plumigerous appearance to the legs.

The *falces* are massive, a little projecting. Profile convex, and furnished with coarse reddish hairs in front.

The *maxillæ* are moderately long, straight, much enlarged at the extremity, and similar to the falces in colour.

The *labium* is nearly quadrate, a little broader than long, with the corners of the apex slightly rounded; its colour is like that of the maxillæ.

The *sternum* is short, heart-shaped, orange-yellow.

The *abdomen* is large, oval. The spinners are short and compact, and the genital aperture is rather large, but of simple and characteristic form. The upperside of the abdomen appears to be destitute of pattern, and only clothed thickly with fine pale hairs.

*Hab.* GUATEMALA, Petexbatun and Antigua (*Sarg*).

## **Olios manifestus,** sp. n.

*Adult female*, length $4\frac{1}{2}$ lines; *adult male*, length $3\frac{1}{2}$ lines.

*Female.* The *cephalothorax* is equal in length and breadth; profile of caput rather flattened convex, broad and obtuse, nearly squarely truncate, at the eyes; its colour is orange-yellow, the caput has a few black bristly hairs on the margins and in the median line, and the normal converging indentations are faintly marked by dusky lines.

The *eyes* are in two transverse rows, of which the anterior is shortest and straight, though owing to the slightly curved outline of the caput it has the appearance of being also curved, and the same may be said of the posterior row; owing, however, to the curvature of the surface of that part the two rows are not, as otherwise they would be, concentric, but the extremities converge a little towards each other. They are small, all on slight black spots; those of the fore central pair are the largest, but not greatly so; those of the posterior row are of equal size, the interval between the two centrals being rather greater than that between each and the lateral on its side, and exceeding two diameters; those of the anterior row are equidistant from each other, the interval between the two centrals being slightly more than a diameter. The four central eyes form a trapezoid whose posterior side is perceptibly the longest, the anterior being slightly the shortest. The height of the clypeus appears to be rather less than a diameter of one of the fore central eyes.

The *legs* are long, rather slender, 2, 1, 4, 3, orange-yellow in colour, speckled pretty thickly, chiefly below, with small, deep red-brown spots and specks, slightly hairy, and armed with long, but not very numerous spines. There is a thin dusky scopula beneath the tarsi and metatarsi, and a strongish claw-tuft at the extremity of the former.

The *palpi* are similar to the legs in colour and armature.

The *falces* are tolerably strong, straight, nearly vertical, convex in front, similar in colour to the cephalothorax, furnished with bristly and other hairs, and each is marked with a longitudinal blackish line in front, rather towards the outer side, and fining off to nothing a little below the middle.

The *maxillæ* are short, slightly inclined to the labium, enlarged and rounded at the extremity, and of a rather paler hue than the cephalothorax.

The *labium* is shorter than broad, the sides parallel, the apex very slightly curved. Colour like that of the maxillæ and sternum, which last is broad heart-shaped.

The *abdomen* is oval, of moderate size, rather truncate anteriorly, and of a brownish-orange colour, thinly clothed with pale greyish hairs; on the fore half of the upperside is a slightly darker longitudinal central tapering marking whose margins are indicated by an imperfect reddish-brown line, and following this to the

spinners is a series of angular red-brown markings, or connected chevrons, the spaces between them being paler than the ground-colour, and so forming of themselves a longitudinal series of pale chevrons. The sides of the abdomen are marked indistinctly with broken blackish lines and scratchy marks. Spinners short, compact, and of a yellow colour. The underside is slightly suffused with dusky brown, bounded on each side by a pale longitudinal line. The genital aperture is inconspicuous but characteristic.

The *male* resembles the female in general characters, colours, and markings; but its legs are longer and more slender, and its eyes larger. The radial joint of the palpus is longer than the cubital, and is greatly enlarged at its fore extremity, where its outer side is produced into a large apophysis, larger than the joint, enlarged and obtuse at its extremity, which ends off suddenly in a small point directed downwards. (Nothing, however, except figures, could give a correct idea of its exact form.) The digital joint is very large, elongate oval, longer than the femoral and cubital joints together, and has a somewhat truncated prominence at its hinder extremity (or base). The palpal organs are highly developed, though not very complex; a strong curved process surrounds their posterior portion, and running round the inner margin fines off into a slender point beneath the fore extremity of the joint.

*Hab.* GUATEMALA, Cahabon and Petexbatun (*Sarg*).

## **Olios sagus,** sp. n.

*Adult female*, length 5 lines.

The *cephalothorax* is a little longer than broad; caput broad, squarely truncated in front; lateral marginal indentations strong; colour dull orange-yellowish; clothed with pale hairs, and with some prominent bristles on the caput; the normal indentations are indicated by broken black-brown lines, and there are also some other irregular lines on the caput.

The *eyes* are on black spots; the posterior row is straight, the interval between those of the central pair greater than that between each and the adjacent lateral; the anterior row is curved, the convexity of the curve directed forwards. The fore central eyes are rather the largest and are seated on a slight prominence; the interval between them is rather larger than that between each and the lateral eye next to it. The four central eyes form a trapezoid whose posterior side is rather the longest. The height of the clypeus is slightly less than the diameter of one of the fore central eyes.

The *legs* are moderately long and strong, 2, 1, 4, 3, similar to the cephalothorax in colour, clothed with pale hairs, and thickly speckled with small reddish-brown spots. Spines long and tolerably strong, a broad scopula beneath the tarsi and metatarsi, and a claw-tuft.

The *palpi* are similar to the legs in colour and armature. The digital joint is the darkest and densely clothed with brown hairs.

The *falces* are rather short, but massive, projecting, strongly prominent in front; rather richer coloured than the cephalothorax, and marked in front with a longitudinal black tapering stripe or line.

The *maxillæ* and *labium* are normal in form, and similar to the cephalothorax in colour.

The *abdomen* is oval, of a dull brownish-yellow hue. The normal dorsal marking is yellow, margined with a broken dark red-brown line, and a short oblique yellow stripe issues each side towards its hinder extremity. The dorsal marking is followed to the spinners by a series of pale angular markings or chevrons, within the apex of each of which is a red-brown angular spot, forming a longitudinal series reaching quite to the spinners. The sides are marked with indistinct brown lines and spots. The underside has a broad, longitudinal, central dark brown band margined with a yellowish line, and two indistinct parallel yellowish lines near together along the middle. The genital aperture is moderately large and of characteristic form. Spinners short, compact.

*Hab.* GUATEMALA, Petexbatun (*Sarg*).

## **Olios exasperans,** sp. n.

*Adult female*, length $6\frac{1}{2}$ lines.

The *cephalothorax* is very slightly, if at all, longer than broad; caput broad, slightly curvo-truncate anteriorly; lateral marginal indentations slight; colour dull orange-yellow; the normal grooves indicated by dusky

lines; profile tolerably convex. The height of the clypeus is equal to the diameter of one of the fore central eyes.

The *eyes* are in two rows, with the usual appearance of being curved when looked at from above and behind; the convexity of the curve of the anterior row is directed slightly forwards, while that of the posterior row is in an opposite direction. The fore central pair are rather the largest; those of the posterior row are the smallest and of equal size with each other. The eyes of the anterior row are equidistant from each other, while the interval between the hind central pair is slightly less than that between each and the lateral next to it. The four central eyes form a slightly oblong trapezoid whose anterior side is a very little shorter than the posterior side.

The *legs* are long, rather slender, 2, 1, 4, 3; similar in colour to the cephalothorax, the tarsi and metatarsi dark brown, and furnished with a broad, rather dense scopula and a claw-tuft. Spines long and tolerably strong.

The *palpi* are similar to the legs in colour and armature, the digital joint black.

The *falces* are strong, straight, slightly projecting forwards, and prominent in front, clothed with coarse hairs and bristles.

The *maxillæ* are straight, enlarged and rounded at the extremity, slightly inclined to the labium, and of a dark reddish-brown hue.

The *labium* is short, shorter than broad, the apex slightly rounded; similar to the maxillæ in colour.

The *abdomen* is rather large, of a dull brownish-yellow hue, clothed with pale hairs; an elongate stripe bounded by a broken dark line, and rather tapering to its extremity, occupies the median line of the fore half of the upperside, and is followed to the spinners by a series of transverse, slightly oblique bars, similarly indicated, and meeting in a dark irregular longitudinal central line, representing the usual chevrons. The underside has a broad, central, longitudinal dark sooty-brown band from the genital aperture nearly to the spinners. The genital aperture is large, transverse-oval or rather kidney-shaped. The spinners are short, compact, and brown.

*Hab.* GUATEMALA, Chicoyoito (*Sarg*).

The egg-cocoon accompanied this spider; it is of very large size, round, lenticular.

## XYSTICUS, C. Koch.

### **Xysticus adustus,** sp. n.

*Adult female*, length rather over $2\frac{1}{2}$ lines.

This spider is of the ordinary form.

The colour of the *cephalothorax* is a dull orange-yellow, slightly deeper in the ocular region, and the sides of the thorax are a deep rich red-brown, the inner margin of the coloured portion broken but well defined, and with strong prominent black bristles on and near the ocular area and clypeus.

The *legs* are of moderate length, strong, well furnished with spines, bristles, and hairs; similar in colour to the cephalothorax, spotted with small deep red-brown spots, from many of the larger of which the spines and bristles spring; the genuæ and nearly the fore half of the tibiæ (with a small portion of their base) of the first and second pairs are dark red-brown.

The *falces* are strong, conical, vertical, similar to the cephalothorax in colour, and furnished with some strong prominent bristles near their base.

The *maxillæ*, *labium*, and *sternum* are yellow, the last being clearer and paler in colour than the others.

The *eyes* are normal in relative size and position; those of each lateral pair are seated on strong greyish tubercles. The height of the clypeus is equal to half that of the facial space.

The *abdomen* is of the ordinary form in this genus, broader behind than in front, where it is somewhat roundly truncated. The upperside is furnished with numerous prominent slightly curved black bristles; its colour is dull brownish-yellow, palest along the middle, where traces of the normal angulated pattern are visible, the rest of the upperside being marked in a somewhat striated fashion with broken markings of a deep blackish-red-brown; three whitish spots forming a triangle on the fore half are rather distinct,

there being one or two less distinct on the hinder half; the fore corners of the abdomen are also suffused with white. The sides and underside are brownish-yellow; rugulose. The genital aperture is small but of characteristic form and structure.

*Hab.* GUATEMALA, Coban (*Sarg*).

## **Xysticus advectus,** sp. n.

*Adult female*, length rather over $2\frac{1}{2}$ lines.

In its general form, colour, and appearance this spider calls to mind various European species of the *X. cristatus*-group.

The *cephalothorax* has its sides of a deep brown, mottled and irregularly marked with a lighter hue; the broad central band, the larger portion of which in front forms the normal spade-shaped marking, is of a light brown colour, darker across the fore end, where it includes the posterior eyes, and bisected longitudinally by a dark brown line interrupted by two or three pale spots; the spade-mark is delineated by a narrow white marginal line, the central band behind this marking being of a yellowish-white hue. The clypeus and ocular area are yellowish-white, this colour forming a transverse well-defined oblong marking whose four corners are produced and divergent. The cephalothorax is furnished with strong bristles, strongest and most numerous on the upper part and in front. The height of the clypeus is equal to nearly half that of the facial space.

The *eyes* are normal.

The *falces* are strong, conical, dark brown at the base, where they have some strong bristles, yellowish-white across the middle, and paler brown at the extremity.

The *sternum* is brownish-yellow mottled with white, spotted with dark red-brown and broadly bordered with blackish-red-brown anteriorly.

The *legs* are rather short, moderately strong, furnished in the ordinary way with spines, bristles, and hairs. They are of a pale dull yellowish hue, mottled and indistinctly lined with white, and spotted and marked with dark reddish-brown. The markings on the tibiæ, genuæ, and metatarsi of the first two pairs are more distinctly linear than the rest, and the basal joints (coxæ) of all the legs are marked with three longitudinal broken dark brown lines with white interspaces.

The *abdomen* is of the ordinary form. It is of a dull yellowish colour, marked and mottled with white, and has some broken blackish lines and markings indicating the normal angulated central longitudinal pattern, and the sides towards the hinder part have some oblique lines of black spots. Its upperside is thinly furnished with short strongish black prominent bristles. The genital aperture is small, but of characteristic form.

*Hab.* GUATEMALA, Chicoyoito (*Sarg*).

## SYNÆMA, Simon.

## **Synæma bimaculata,** sp. n.

*Adult female*, length 2 lines; *adult male*, length $1\frac{1}{3}$ line.

The *cephalothorax* (♀) is orange-yellow, paler at and near the thoracic junction, and with a slender black marginal line; on and near the sides and front of the caput are a few long black bristles. The height of the clypeus is a little less than half that of the facial space.

The *legs* are moderate in length and strength, brownish-orange-yellow; the first two pairs have the femora and genuæ, as well as the base and extremity of the tibiæ (leaving an orange-brown annulus near the middle of the latter), almost entirely rich dark brown; the two posterior pairs, as well as the *falces*, *maxillæ*, *labium*, and *sternum*, are yellow. The legs are furnished with spines, chiefly on the metatarsi, femora, and tibiæ of the first and second pairs.

The *eyes* are in the normal position—two almost concentric curved rows, the anterior row rather the most curved; all are on greyish tubercles, those of the lateral pairs the strongest. The four central eyes form

very nearly a square, the anterior side being slightly shorter than the posterior side. The lateral eyes of the anterior row are largest, the hind laterals next, and the four centrals smallest.

The *abdomen* is broad and rounded behind, narrow and rounded in front; of a pale yellowish-brown hue flecked with white on each side of the anterior half, and with two large conspicuous white round or oval spots in a transverse line near the middle of the upperside, and placed in conjunction with some irregular deep rich black-brown markings forming altogether a large triangle; this is followed towards the spinners by some transverse bars of the same colour, forming (some at least) broken angular marks or chevrons. The lower part of the sides, as well as some portion of the underside, principally in the vicinity of the spinners, are also marked with dark brown. The abdomen is furnished sparingly with hairs and a few bristles. The genital aperture is small and simple, but characteristic in form. (One example of the female has the abdomen completely dark rich reddish-black-brown, with only the two white spots, followed by several fine pale angular stripes or chevrons, decreasing in length to the spinners.)

The *male* has the cephalothorax entirely deep rich reddish-black-brown, the eyes margined with yellowish. The legs are much longer than those of the female; the femora, genuæ, and tibiæ of the first and second pairs similar to the cephalothorax in colour, excepting a paler annulus near the middle of the tibiæ. The rest of the legs and the palpi are pale yellowish. The femora of the first pair are furnished with some long strong spines, the second pair having fewer spines; those on the tibiæ of both pairs are also strong.

The *palpi* are short; the cubital and radial joints are of equal length; the latter has several strong bristles, the longest and strongest of a tapering spine-like form on the inner side, and a small prominent spine-like pointed apophysis at its extremity on the outer side. The digital joint is rather small, oval, rather sharp-pointed at its extremity. The palpal organs are simple, neither prominent nor highly developed.

The *abdomen* is entirely deep rich reddish-brown both above and below, excepting the two white characteristic spots on the upperside.

*Hab.* GUATEMALA, Chicoyoito, Cahabon, Chichochoc, Coban (*Sarg*).

## RUNCINIA, Simon.

### **Runcinia vigilans,** sp. n.

*Adult female*, length 2 lines; *adult male*, length rather over 1 line.

The *cephalothorax* is bright yellow-brown, narrowly margined with dull yellowish, with a large oval portion on and around the thoracic junction of a paler brownish-yellow hue; from the middle of this a white line runs forward, becoming indistinct where it approaches the eyes; on each side of this line is another less distinct, the two converging towards but not reaching the thoracic junction. The sides of the cephalothorax are also marked with some irregular somewhat sinuous pale lines. The whole is clothed with short pale bristly hairs. The ocular region is paler than the rest, and has a curved transverse white line running across it just in front of the posterior eyes, marking the edge of a sharp transverse ridge.

The *eyes* are minute, the fore laterals being distinctly largest; the quadrangle formed by the four centrals is rather broader than long, and the anterior side of it is the shortest. The height of the clypeus is considerably less than half that of the facial space. The intervals between the eyes of the posterior row are as nearly as possible equal.

The *legs* are tolerably long and moderately strong, the second pair being much longer than the first pair; the colour of these last, and that of the two posterior pairs, is pale dull yellowish; the colour of the second pair is dark yellow-brown, mottled with dull cream-colour underneath, the metatarsi and tarsi being less dark than the rest. The metatarsi are armed underneath with five pairs of strong spines, while those (three pairs) under the tibiæ are much less strong.

The *falces* are strong, conical, and of a brownish-yellow colour, mottled in front with whitish.

The *abdomen* is of the ordinary Thomisid form, broadest behind, truncated in a very slightly curved line in front. Upper surface flattish; sides and hinder side steep, strongly rugulose longitudinally on the sides, transversely behind; of a clear yellow-brown hue marked above with rather irregular transverse broken black stripes which are continued obliquely over the sides, and two largish black spots in a transverse line near

the middle, the whole being spotted with minute whitish points and furnished with short pale bristles. The underside of the abdomen (as well as the sternum, maxillæ, labium, and palpi) is of a dull yellowish colour. The genital aperture is small and very inconspicuous, though of characteristic form.

The *male* resembles the female in general colour and markings; but the cephalothorax, in the only example examined, has no pale oval marking at the thoracic junction, the whole being of a unicolorous yellow-brown hue. The *palpi* are short, similar in colour to the posterior legs; the radial joint is very short, shorter than the cubital, furnished with three spine-like bristles on the upperside, and with a rather long slightly tapering straight apophysis, longer than the joint itself, at its outer extremity (fitting up close to the outside of the digital joint), and slightly bifid at its point; the digital joint is narrow-oval, about equal in length to the radial and cubital together. The palpal organs are simple—an oval lobe surrounded by a slender pale pointed spine—and with a small pointed spine at their anterior extremity. The armature of the second pair of legs is stronger than in the female; but the spines are fewer in number—only three pairs, while in the female there are five pairs.

*Hab.* GUATEMALA, Chicoyoito (*Sarg*).

## **Runcinia tibialis,** sp. n.

*Adult male*, length $1\frac{1}{3}$ lines.

This species is of a very flattened form, short, and broad.

The *cephalothorax* is distinctly broader than long, the caput very short, the thorax rounded on the sides; its colour is bright red-brown suffused with blackish on the sides; a clear, strongly defined, yellowish-white line running across the caput immediately in front of the posterior row of eyes. On the sides of the thorax, near the margin, are a few short spines springing from small tubercles, and there are also a few prominent spines on the ocular area and lower margin of the clypeus. The height of the clypeus is less than half that of the facial space, and its direction is vertical.

The *eyes* are in the usual position. Those of the posterior row are very nearly equidistant from each other; if anything, the interval between the two centrals is slightly the largest. The four centrals describe a trapezoid whose anterior side is shorter than the posterior, and the sides rather shorter than the anterior. The eyes of the anterior row are equidistant from each other, and its laterals are rather the largest of the eight.

The *legs* are 2, 1, 4, 3. The first and second pairs are long and strong, the third and fourth pairs short and much smaller. The former have the femora, genuæ, and tibiæ black-chestnut coloured, and the metatarsi and tarsi reddish-yellow-brown, becoming gradually paler towards the extremity. The femora, tibiæ, and genuæ of the first and second pairs are all unusually strong, but the tibiæ disproportionately so. The femora are covered with small tubercular granulations, from which issue small spines, bristles, or hairs; beneath the tibiæ are three pairs of strong spines and some coarse bristly hairs, and beneath the metatarsi are two pairs of spines. The third and fourth pairs are of a reddish-orange colour, furnished with hairs and bristles, but devoid of spines.

The *falces* are rather short, conical, directed backwards, and similar in colour to the cephalothorax.

The *palpi* are very short. The radial is shorter than the cubital joint, and has a strongish slightly tapering spine issuing from its outer side, with two other shorter spines on its inner side, its outer extremity being produced into a somewhat tapering apophysis as long as or longer than the joint itself, with its rather broad end extremity bifid or notched. The digital joint is of moderate size, oval, pointed at its extremity, furnished with bristles and one or two spines outside. The palpal organs are simple and encircled by a closely adhering black spine.

The *abdomen* is of a short-oval or somewhat quadrate form truncated in front; its colour is dull yellow-brown, the lateral margins, sides, four diffuse spots on the middle of the upperside, and some transverse lines or bars on the hinder half extending over the sides being deep chocolate-brown.

The colour of the maxillæ, labium, and sternum is similar to that of the cephalothorax.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Runcinia blanda,** sp. n.

*Adult male*, length $1\frac{1}{2}$ to $1\frac{3}{4}$ lines.

The *cephalothorax* is nearly equal in length and breadth, rounded behind, truncated before, and of equal and moderate convexity. The colour is a dull orange-brown, with in some examples a pale yellowish central patch on the thorax, pointed behind and bifid in front, this patch being sometimes obsolete; the ocular region is whitish, owing to the tubercles of that colour on which the eyes are seated; and the sides of the thorax have some minute granulosities on their surface. The height of the clypeus equals half that of the facial space.

The *eyes* are in the usual position and of the normal relative size.

The *legs* are 2, 1, 4, 3. Those of the first and second pairs are long, tolerably strong, and of a deep rich yellow-brown approaching liver-colour, the femora being perhaps rather the darkest, the latter covered with minute granulosities and with a row of four spines along the upperside; underneath the tibiæ are two pairs of spines, and there are three pairs of spines beneath the metatarsi. The third and fourth pairs of legs are short, without spines, except two or three minute ones on the upperside of the femora, and of a yellow colour.

*Falces* moderately strong, subconical, vertical, and similar in colour to the cephalothorax.

*Palpi* short. The radial is scarcely more than half the length of the cubital joint, the latter having a spine-like bristle on the outer side and two other bristles on the inner side. The digital joint is narrow-oval, rather longer than the cubital and radial joints together, and on the inner margin forwards are several spines; on the outer extremity is a, not very long, tapering apophysis scarcely equal to the length of the joint, and whose fine point is a little turned outwards, and underneath is a shorter obtuse apophysis. The palpal organs are simple and encircled round their margin with a closely adhering black spine. The colour of the palpi is similar to that of the third and fourth pairs of legs, as is also that of the maxillæ, labium, and sternum.

The *abdomen* is of a short-oval rather flattened form, roundly truncated in front; it is of a dull brownish-yellow hue, smooth and glossy on the upperside, where it is of a rather deeper colour, with the five normal depressed points dark yellow-brown.

Although nearly allied to *Runcinia tibialis*, this spider may easily be distinguished by the incrassation of the tibiæ of the first and second pairs of legs, as well as by the various other specific differences. It is also still more closely allied to *R. annulipes*, but may be distinguished by the following characters:—

(i) The unicolorous dark yellow-brown (rather liver-coloured) first and second pairs of legs (these being annulated in *R. annulipes*); and the presence of spines in pairs beneath the tibiæ and metatarsi.

(ii) The form of the pale central patch on the thorax: this is, when visible, in the present species pointed behind and bifid in front, making it look like a barbed arrow-head directed backwards; in some examples, as above noted, this patch is obsolete, and in others only faintly visible.

(iii) The apophysis at the fore extremity on the outer side of the radial joints of the palpi is shorter than the joint, not so strong as in *R. annulipes*, and terminates in a simple point, a little directed outwards.

In other respects the two species, *R. blanda* and *R. annulipes*, are remarkably similar. This, however, only applies to the male, from which the female differs remarkably, if indeed it is the female of the same species, of which, in spite of the opinion of Mons. Simon, who has kindly examined these examples, I have some doubt.

*Adult female*, length slightly over 3 lines.

The *cephalothorax* is dark yellow-brown or liver-coloured, with a conspicuous yellowish-white longitudinal patch on the thorax, bifid in front and emitting a central branched line of the same colour from its fore extremity to the ocular region.

The *legs* are not very long, strong, and of a pale whitish-yellow colour; the genuæ, a small well-defined annulus at the base, a much larger one at the fore extremity of the tibiæ, and a less distinct one at the fore extremity of the metatarsi being of a similar colour to the cephalothorax. The tibiæ have only one or two spines underneath, while there are five or six pairs beneath the metatarsi.

The *maxillæ*, *labium*, *sternum*, and *coxal joints* of the legs are yellow-brown, not quite so dark as the annuli on the legs.

The *abdomen* is of the pentagonal form common among the Thomisidæ in this sex. It is of a cream-yellow colour, with a brownish-yellow angular marking, formed by two oblique stripes meeting in front and open behind, on the fore part of the upperside, followed by two irregular patches of the same colour in a transverse line nearly halfway towards the posterior extremity, and wider apart than the ends of the oblique stripes. The anterior sides of the abdomen, as well as a broad central longitudinal band on the underside, are also of a brownish-yellow hue. The form of the genital process is characteristic and distinct, although rather inconspicuous.

If future research should prove this to be not the female of the male above described, the short diagnosis given will perhaps enable it to be removed to its proper place.

*Hab.* PANAMA, ♂ Bugaba, ♀ Volcan de Chiriqui (*Champion*).

## **Runcinia rugosa,** sp. n.

*Adult female*, length $2\frac{1}{4}$ to rather over $2\frac{1}{2}$ lines.

In its general form and structure, as well as in the position of the eyes, this spider is of the usual type. The whole surface is more or less covered with short, blunt, prominent bristles, some almost spinous in their character, some (on the caput and abdomen) showing a tendency to become slightly clavate at the extremity.

The *cephalothorax* is of a reddish-yellow-brown hue, deepest on the sides of the thorax, and a broad central longitudinal pale band gradually merges into the normal colour of the rest on the caput; on the sides are traces of some indistinct converging and oblique pale lines. A transverse curved yellowish line runs across the caput through the middle of the ocular area.

The *legs* are rather strong and not very long, 2, 1, 4, 3. Their colour is similar to that of the cephalothorax, and there are strongish spines in pairs beneath the tibiæ and metatarsi of the first and second pairs; the number of pairs of spines does not seem to be quite similar in different examples. The third and fourth pairs of legs are pale yellowish, slightly marked with brown near the joints, and have no spines.

The *falces*, *maxillæ*, and *labium* are rather lighter coloured than the two anterior pairs of legs; and the *sternum* is similar in colour to the two posterior pairs.

The *abdomen* is of the ordinary (Thomisid) pentagonal form—truncated before, broad behind; it is of a dull yellow-brown hue, marked with deep brown, transverse, broken and sometimes confluent, curved, parallel lines on the hinder half, with others differently arranged on the fore part of the upperside. The ordinary rugæ are also marked with small pale spots, giving a generally speckled appearance. Underneath, the colour is a uniform pale yellow-brown. The genital aperture is small and inconspicuous, but of characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Runcinia depressa,** sp. n.

*Adult male*, length $1\frac{1}{4}$ line; *adult female*, length 2 lines.

The general form of this species is short, broad, and flattened.

The *cephalothorax* of the male is as short as, or shorter than, broad, and its surface (chiefly of the thorax) is granulose, with short spine-like bristles. The colour is rather bright red-brown, the normal converging indentations of a deeper hue, and there is a narrow nearly black margin. Along the centre of the hinder part, and reaching a little into the caput, is an indistinct red band sharply bifid in front; a conspicuous white transverse curved line runs through the middle of the ocular area. The height of the clypeus is nearly or quite equal to half that of the facial space, and on its lower margin are several strong prominent pointed spines.

The *eyes* are rather larger than usual, and the two middle ones in each row are distinctly wider apart than each is from the lateral eye in the same row.

The *legs* are moderately long, rather strong, 2, 1, 4, 3. Those of the first and second pairs are of a deep dark rich brown; the genuæ and tibiæ black, the tibiæ somewhat incrassated; the metatarsi paler, and the tarsi reddish-yellow-brown. Beneath the tibiæ and metatarsi are several pairs of spines, those beneath the tibiæ the longest, most prominent, and slightly curved. The two posterior pairs of legs are of a brownish-yellow colour, with some faint traces of darker annulation.

The *palpi* are very short, of a yellow-brown colour. The radial is shorter than the cubital joint; the cubital has several short rather obtuse spine-like bristles in front, and the radial some longer ones, and the fore extremity of the latter on the outer side is produced into a short, tapering, straight, and bifid apophysis, the two limbs obtusely pointed. The digital joint is of moderate size, oval, and slightly longer than the radial and cubital joints together. The palpal organs are simple and encircled with a closely fitting spine.

The *maxillæ*, *labium*, and *sternum* are of a dark yellowish-brown hue.

The *abdomen* is of a flattened form, truncated before, rounded and broadest behind; it is of a deep rich chestnut-brown colour, marked and mottled with a paler hue, and a few small whitish-yellow spots are sprinkled somewhat symmetrically over its surface; it is also sparingly furnished with short rather obtuse spine-like bristles.

The *female* resembles the male in general colour and appearance, but the markings on the cephalothorax are different: the sides are marked with converging black lines, and three irregular yellowish lines run backwards—one from each of the hind lateral eyes and the middle one through the ocular area, meeting in a blotch of the same colour at the thoracic junction. The margins of the caput are also yellowish-white. The legs, especially the femora, are distinctly marbled on their anterior side with yellowish. On the abdomen a central yellow-brown stripe, with a blotch of the same hue on each side, towards the hinder part of the upperside, is pretty distinct.

*Hab.* GUATEMALA, Chiacam, Petet, Coban (*Sarg*).

## **Runcinia signata,** sp. n.

*Adult female*, length 4 to $5\frac{1}{2}$ lines.

*Cephalothorax* rather longer than broad; colour dull orange-yellow-brown; on each side—leaving a more or less definite lateral stripe margined narrowly with cream-white—is a broad longitudinal dark reddish-yellow-brown band. In some examples these bands become dilated and suffuse the whole of the sides, with the lateral paler band darkest coloured at its anterior extremity; at the thoracic junction is a pale cream-yellow distinctly defined patch, somewhat quadrate in form, but deeply notched in at its fore margin. The ocular region is also cream-white, and a line of a similar colour runs a little way back obliquely from beneath each lateral pair of eyes.

The *legs* are moderately long and strong; their colour is yellow, washed in parts with cream-white, and (in some examples) the genuæ, a small band at the hinder end of the tibiæ, and the metatarsi are more or less strongly suffused with dark yellowish-red-brown. Beneath the tibiæ of the first two pairs of legs are two pairs of spines, and there are five pairs of spines in two longitudinal parallel rows beneath the metatarsi. There are also several (three to five) small denticulæ on the anterior or upper side of the femora of the first pair of legs, somewhat resembling those in a similar position in the genus *Ornithoscatoides* (Cambr.), and which are, in that genus, considered to be used as a means of steadying the spider when lying on its back on a leaf waiting for its prey (*vide* P. Z. S. 1884, p. 199). The second pair of legs is rather longer than the first. The colour of the coxal and exinguinal joints is dull yellowish-red-brown, as is also that of the *maxillæ* and *labium*; the sternum being yellow, broadly margined with reddish-yellow-brown.

The *eyes* are minute, the fore laterals slightly the largest; they describe the usual crescent or segment of a circle; the four central eyes form a quadrangle broader than long, its anterior side being shorter than the posterior side, but longer than the length of the quadrangle. The height of the clypeus is less than half that of the facial space.

The *falces* are moderately long, strong, conical, dark yellow-brown, irregularly washed in front with cream-white.

The *abdomen* is large, of a pentagonal form, much broader behind than in front, where it is somewhat roundly

truncated. The sides and hinder part are longitudinally and transversely rugulose, as well as the rest of the upperside; each interval between the rugæ has a series of very minute tubercular denticulæ. The colour of the abdomen is dull yellow and cream-white, the latter colour most suffused on the upperside, but chiefly following the direction of the rugæ. In some examples the sides are marked with one or more fine black lines. In one or two specimens the ground-colour of the abdomen is dark yellowish-brown. The genital aperture is small, inconspicuous, but of characteristic form.

*Hab.* GUATEMALA, Cahabon and Chicoyoito (*Sarg*).

## Runcinia sagittata, sp. n.

*Adult female*, length $3\frac{1}{3}$ lines.

The general form and aspect of this spider is of the ordinary type.

The *cephalothorax* is yellow-brown, darkest on the sides of the caput. The thorax has a distinct yellow-white marginal border, and a clear line of the same colour runs transversely across the fore part and sides of the caput below the eyes. The ocular area is suffused with yellowish-white, and the upper part of the caput has some streaks and marks of the same colour connecting the ocular area with a very distinctly marked, barbed, arrow-head, yellow-white patch covering the thoracic junction, the point of the arrow-head directed backwards.

The *eyes* are in the ordinary position, small; the fore laterals only slightly the largest, and the intervals between the central pair of each row very little greater than that between each and the lateral eye next to it of the same row. The height of the clypeus is more than half that of the facial space.

The *falces* are yellowish-white, slightly marked near the base with yellow-brown.

The *legs* are moderate in length and not very strong, 1, 2, 4, 3, of a dull yellowish hue tinged with brown. The anterior two-thirds of the metatarsi, as well as the tarsi, of the first and second pairs are dark reddish-brown, and the anterior extremity of the tibiæ of these two pairs is also slightly marked with red-brown. The spines are few and weak, none apparently on the femora, two in front of the tibiæ of the first pair. The rest in pairs beneath the metatarsi of the first and second pairs of legs. It is possible, however, that some spines may have been broken off.

*Maxillæ, labium, and sternum* similar in colour to the legs. The sternum has a broad yellow-white angular border in front.

The *abdomen* is somewhat pentagonal in form, narrow and truncated in front, much the broadest behind. It is of a yellow-brown hue, suffused more or less with whitish-yellow and at the centre of the fore extremity is a not well defined dark brown patch somewhat bifid behind. The underside has a brown longitudinal central band bordered laterally with whitish-yellow. The genital aperture is distinct and of characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## Runcinia propinqua, sp. n.

*Adult female*, length $2\frac{1}{2}$ to $3\frac{1}{2}$ lines.

This species is of the ordinary form.

The *cephalothorax* is brownish-yellow, with narrow lateral margins, a broadish lateral longitudinal reddish-brown band on each side, and a somewhat angular yellow-white marking at the thoracic junction, the angle directed backwards. A clearly marked whitish line runs transversely across the fore part and sides of the caput below the eyes; on the caput are two or three short black bristles.

The *eyes* are normal in relative size and position; those of the posterior row are very nearly equidistant from each other, while the interval between the central pair of the anterior row is distinctly greater than that between each and the lateral eye next to it. The height of the clypeus is half that of the facial space.

The *falces* are yellowish-white, with a large irregular yellow-brown patch at the base in front.

The *legs* are rather short, strong, 2, 1, 4, 3. They are of a yellowish hue, the fore half of the tibiæ of the first and second pairs dark reddish-brown, and their metatarsi and tarsi of a lighter brown. The femora

appear to be devoid of spines, but there are some in pairs beneath the tibiæ and metatarsi. The third and fourth pairs of legs are without spines.

The *maxillæ*, *labium*, and *sternum* are of a uniform yellow colour.

The *abdomen* is of a subpentagonal form, narrowest and rather rounded in front and broadest behind, but less pointed at its posterior extremity than in some other species. Its colour is a uniform yellowish-white, with the five normal depressed points on the upperside yellow-brown. The genital aperture is very small, but characteristic.

*Hab.* PANAMA, Bugaba (*Champion*).

This species is nearly allied to *R. sagittata*, but may easily be distinguished by the form of the genital aperture, and also by the different armature and colouring of the legs, as well as by the colours and markings and form of the abdomen.

## **Runcinia lutea,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

This species is very nearly allied to *R. propinqua*, but the cephalothorax wants the longitudinal lateral reddish-brown bands. The legs also are weaker and unicolorous, and the spines beneath the tibiæ of the first and second pairs are weak. The genital aperture is very small, but characteristically different. In most other respects there is a great similarity. The whole of the fore part of the spider is yellow with a slight brownish tinge and with a white triangular marking at the thoracic junction, joined to the ocular area by a central white line. The abdomen is yellowish-white, with a well-defined deep red-brown patch on each side at the fore extremity. The ocular area is whitish, and a distinct white transverse line runs round the caput below the eyes. The cephalothorax is narrowly margined with white.

*Hab.* GUATEMALA, Montaña de Chilasco (*Sarg*).

## **Runcinia annulipes,** sp. n.

*Adult male*, length $1\frac{1}{2}$ lines.

*Cephalothorax* slightly broader than long, but of the usual form; colour yellow-brown, with a broad pale yellowish central band, not, however, reaching the ocular area, with which it is connected by a yellowish central line bisecting that area; a very distinct white marginal line runs round the front and sides of the caput.

The *eyes* are on rather stronger than usual grey or whitish tubercles, and in each row the interval between the two central eyes is slightly but distinctly greater than that which separates them respectively from the laterals. The four centrals form a trapezoid the front side of which is shorter than the hinder, and the sides rather shorter than the front. The laterals of the anterior row are the largest of the eight, and the height of the clypeus is scarcely more than equal to the diameter of one of the fore central eyes.

The surface of the *cephalothorax* is apparently devoid of granulosities, but has a few short spine-like bristles on each side of the hinder part of the thorax.

The *falces* are similar in colour to the cephalothorax, subconical in form and furnished with strong prominent bristles in front.

The *legs*, 2, 1, 4, 3, are not very strong, but the first two pairs are long and the third and fourth short, as usual. The first two pairs are of a yellow-brown hue, for the most part considerably darker than the cephalothorax, the femora being the darkest, finely granulose, and with a few spine-like bristles along the hinder margin. The tibiæ, metatarsi, and tarsi have each a distinct broadish though not sharply defined yellowish annulus at their base; they are well furnished with hairs and long bristles, but devoid of spines, excepting perhaps one or two beneath the metatarsi. The two hinder pairs of legs are pale yellow, the tibiæ with two or three spines or spine-like bristles on their upper or posterior side.

The *palpi* are short and of a pale yellowish colour. The radial is shorter than the digital joint, and has several spine-like bristles on it, and at the outer extremity it is produced into a tapering apophysis about equal to

the joint in length, and ending with a very short curved claw or nail. The digital joint is of a narrow-oval form, sharp-pointed before. The palpal organs are simple, of a rather prominent semiglobular form, surrounded by a closely adhering black spine.

The *maxillæ* and *labium* are similar to the cephalothorax in colour, the colour of the *sternum* being like that of the two posterior pairs of legs.

The *abdomen* is of an oval form, rather flattened; its colour is a dull brownish-yellow, the upperside smooth and glossy, showing distinctly the five normal impressed spots of a dark yellow-brown hue; the sides have a not very distinct blackish marginal stripe, and the underside has four longitudinal parallel blackish lines.

In general appearance this species somewhat resembles *Runcinia blanda*, but the absence of the pairs of spines beneath the tibiæ and metatarsi of the first and second pairs of legs, and many other specific differences, will serve to distinguish it without difficulty.

*Hab.* GUATEMALA, immediate neighbourhood of Guatemala city (*Sarg*).

## TIBELLUS, Simon.

### **Tibellus punctipes,** sp. n.

*Adult female*, length 3 lines.

The *cephalothorax*, *legs*, *palpi*, and *falces* are pale yellow, marked with minute black spots, those on the legs being the largest. The *abdomen* is thickly mottled with white, powdered with very minute black points, and has an elongated cruciform dull blackish marking on the fore half of the upperside. The underside of the abdomen, as well as the maxillæ, labium, sternum, and coxal joints of the legs, is unspotted.

The *eyes* are very small, black, and in the ordinary position, the height of the clypeus being half that of the facial space.

The *legs* are moderately long, rather strong, furnished with hairs, bristles, and long spines.

*Hab.* GUATEMALA, between Sibacapo and Tajulla, on the mountains, at a height of 3800 metres (*Sarg*).

## SYNÆMA, Simon.

### **Synæma cirripes,** sp. n.

*Adult male*, length 2 lines; length of leg of first pair $4\frac{1}{2}$ lines, and of leg of second pair 4 lines.

The *cephalothorax* is nearly round. Caput short, slightly constricted laterally on the margins forwards, of a dull orange-yellow colour, narrowly edged with a black marginal line, and with the upper part of the caput in a large wedge-form, and some indistinct converging stripes on the sides, of a paler hue. The height of the clypeus is less than half that of the facial space. The fore margin and sides of the caput are furnished with some long, strong, spine-like, black bristles.

The *eyes* are unequal in size, in form of a crescent, those of the lateral pairs the largest; the largest of these being the fore laterals; all are seated on bluish-grey tubercles, those of the laterals much the strongest. The four centrals are of equal size and form a square. The hind central pair are nearer to each other than each is to the hind lateral on its side, the fore central pair being much further from each other than each is from the fore lateral eye on its side.

The *legs* of the first and second pairs are long, nearly equal in length (they were, in the only example examined, much damaged, but those of the second pair seemed to be longest), and rather slender; the femora and genuæ dark brownish-orange; the tibiæ paler, with nearly the fore half deep reddish-brown. The metatarsi and tarsi are pale yellowish, the tip of the latter brown; they are armed with hairs, bristles, and slender spines. The hairs on the dark anterior portion of the tibiæ of the first pair, and (in a less degree) on that of the second pair, form a kind of thin tuft. The spines of the first pair are stronger and more numerous than

those of the second; the third and fourth pairs are much shorter than the others, of a pale yellow colour, but armed like those of the first and second pairs.

The *falces* are moderate in length and strength, conical, vertical, similar in colour to the cephalothorax, and furnished with some strongish prominent bristles near their base in front.

The *palpi* are short, similar to the legs of the first two pairs in colour. The radial and cubital joints are short, the latter rather the longest; the former has the outer extremity produced into a tapering, sinuous, sharp-pointed apophysis as long as the joint itself; these joints are furnished with long, strong, curved, black, tapering bristles of different lengths. The digital joint is large, broad-oval, rather pinched-in at the point, and furnished with long hairs and bristles; near the base on the outer side is a small prominence terminating with a small, curved, pale, sharp-pointed spine nearly in contact with the point of the radial apophysis. The palpal organs are simple, not very prominent, and encircled with a strongish black spine.

The *maxillæ*, *labium*, and *sternum* are of normal form, and of a pale yellow colour.

The *abdomen* is oval, roundly truncated before, and obtusely pointed; the upper surface is rather flat and of a dull brownish-yellow colour; the sides of the fore half are marked with large irregular deep blackish chocolate-brown markings, the hinder half with a series of transverse bars of a similar colour, diminishing in length as they approach the spinners, and the whole surface furnished thinly with some long, strong, tapering, slightly curved, black bristles directed backwards; the outer edge of the upper pattern has a few whitish spots on it, but the sides are slightly rugulose and of a pale whitish-yellow hue; the underside has a broad, central, longitudinal, darkish orange-brown band, narrowest at the spinners, and occupying nearly its whole area. The spinners are short, compact, and of a brownish colour outside.

*Hab.* GUATEMALA, Magdalena near Antigua (*Sarg*).

A fine and very distinct species.

### **Synæma puta,** sp. n.

*Adult female*, length slightly less than 2 lines.

The *cephalothorax* is normal in form, of a dull orange-yellow colour, with an indistinct paler angular or somewhat arrow-head-shaped marking behind the caput, the point directed backwards; a few black bristles are disposed on various parts of the surface, and the height of the clypeus is rather less than half that of the facial space.

The *eyes* are normal in their general position and relative size. The central trapezoid is a little longer than broad, the anterior side being rather the shortest. The eyes of the hind central pair are slightly smaller than the fore centrals, and are distinctly but not greatly nearer together than to the hind laterals, and those of the fore central pair are very slightly further from each other than from the fore laterals.

The *falces* are short, strong, subconical, vertical, and similar in colour to the cephalothorax.

The *legs*, 2, 1, 4, 3; very little difference in length between those of the first and second pairs—if any, the second appear to be the longest; these pairs are similar to the cephalothorax in colour, the anterior portion of the tibiæ suffused with a deeper hue; the metatarsi and tarsi, together with the legs of the third and fourth pairs, are pale yellow. The spines are strongest and most numerous on the tibiæ and metatarsi.

The *palpi* are short, pale yellow, and furnished with a few bristles.

The *maxillæ*, *labium*, and *sternum* are of normal form and of a yellow colour, not quite so pale as the posterior legs.

The *abdomen* is short, tolerably convex above, much the broadest behind, subpentagonal in form, of a uniform deep chocolate colour, marked indistinctly with pale reddish-yellow points and markings, and clothed thinly with hairs and slender bristles. The genital aperture is very small and inconspicuous, but characteristic in form. Spinners short, yellowish, marked with brown on their outer sides.

*Hab.* GUATEMALA, Tikal (*Sarg*).

## **Synæma palliata,** sp. n.

*Adult female*, length 2 lines.

The *cephalothorax* is of ordinary form, of a greenish-yellow hue tinged with reddish in the ocular region, and the sides of the thorax broadly dull red-brown, clothed thinly with short hairs and furnished with a few strongish black bristles directed forwards.

The *eyes* of the central trapezoid form nearly a square: the hinder side is longest, and the anterior the shortest; this last and the sides are as nearly as possible equal. This central figure is thus shorter than normal. The eyes of the hind central pair are distinctly further from each other than from the hind laterals, and those of the fore central pair are distinctly (though only a little) further apart than from the fore laterals. The height of the clypeus is less than, though more than half, that of the facial space.

The *falces* are strong, moderately long, subconical, vertical, furnished with several strong bristles near the base, and of a reddish-yellow-brown colour.

The *legs* are rather short, 1, 2, 4, 3, tolerably strong; spines and hairs normal. The femora, genua, and tibiæ of the first and second pairs are dark reddish-yellow-brown, the tibiæ having a broad yellowish band near the posterior extremity, extending to nearly half the length of the joint. The tarsi and metatarsi are yellow. The legs of the third and fourth pairs are of a uniform pale yellow colour.

The *palpi* are similar in colour to the hinder pairs of legs.

The *maxillæ* are yellow-brown, the *labium* of a more sooty hue, and the sternum pale yellow.

The *abdomen* is short, subpentagonal, very convex above, rounded before, obtusely pointed behind. The upper-side, excepting a small portion above the spinners, is of a uniform cream-yellow colour, clothed with short paler hairs and a very few fine dark bristles. The portion above the spinners and the sides are somewhat rugulose, of a dark chocolate-brown hue, with lines of minute yellowish points following the courses of the different rugæ. The underside is of a deeper and more uniform chocolate-brown. The spinners are short and of a dull brown colour. The genital aperture is small and inconspicuous, but characteristic.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Synæma maculosa,** sp. n.

*Adult male*, length $1\frac{1}{2}$ lines; length of a leg of the first pair over $4\frac{1}{2}$ lines.

The *cephalothorax* is of a dull orange-yellow-brown colour, margined narrowly with black, above which but connected with it in the thoracic region is a broader black-brown border.

The *eyes* are seated upon greyish subconical tubercles, those of the lateral pairs, especially the anterior ones, much the strongest. The eyes of the anterior row are equidistant from each other, while the interval between the hind central pair is slightly less than that between each and the adjacent lateral eye of the same row. The four central eyes form nearly a square, the posterior side of the trapezoid being longest, the sides are next in length, and the fore side the shortest. The height of the clypeus is less than half that of the facial space by about the diameter of one of the fore central eyes.

The *legs* of the first pair are long and rather slender (those of the second pair are wanting in the example described). The femora, genua, and tibiæ of the first pair are dark reddish-brown, the metatarsi and tarsi of a paler hue (only two or three spines remain, the rest having been broken off—they would appear from the broken bases and those remaining to have been tolerably numerous, long, and moderately strong). The two hinder pairs of legs are, as usual, unicolorous, and of a pale yellow hue.

The *palpi* are short, and similar in colour to the hinder legs. The radial joint is slightly shorter than the cubital, and its fore extremity on the outer side terminates with a small, blackish, tapering, pointed apophysis. The digital joint is of moderate size, oval form, and yellow-brown colour. The palpal organs are simple and partly encircled with a black spine.

The *falces* are of tolerable length and strength, subconical, and vertical; their colour is similar to that of the cephalothorax.

The *maxillæ*, *labium*, and *sternum* are normal in form and similar in colour to the falces.

The *abdomen* is of a rather elongate-oval form, rounded at each end, somewhat flattened above, and the upper-side seems to form somewhat of a shield or carapace, enveloping the under part (but this may be only the

result of shrinkage of the underparts from the action of the spirit in which it was preserved). It is of a luteous colour, marked, but not regularly, with some whitish cretaceous-looking markings on the upper-side, which also has three transverse rows, each of four dark black-red spots,—the first row is on the fore margin, and the other two rows divide the upper surface; the space, however, between these rows is greater than that between each and the extremity nearest to it. The posterior margin is marked by a black transverse narrow, but very distinct, border. The sides are margined with blackish-brown.

*Hab.* GUATEMALA, San Juan Chamelco in Vera Paz (*Sarg*); PANAMA, Bugaba (*Champion*).

An immature male only from Bugaba.

## **Synæma affinitata,** sp. n.

*Adult male*, length $1\frac{1}{2}$ lines; *female*, length 3 lines.

The *cephalothorax* of the male is of a red-brown hue, bordered with a deep blackish-red-brown marginal stripe —a mere line at the caput, but gradually becoming much broader at the thorax; the sides and caput are also marked with paler converging stripes corresponding with the normal indentations. The surface is thinly granulose, and thickly covered with very minute shallow punctures, giving it an appearance of shagreen.

The *eyes* are normal in relative size and position; those of the fore central pair are, if anything, very slightly further apart than each is from the adjacent lateral eye, while those of the hinder row are equidistant from each other. The four central eyes form very nearly a square, three sides being equal, but the posterior side is slightly longer than the rest. The height of the clypeus is less than half that of the facial space.

The *legs*, 2, 1, 4, 3, are moderately strong. Those of the two anterior pairs are, as usual, much the longest, and nearly of equal length, and have the femora, genua, and tibiæ of a rich blackish-red-brown colour, the metatarsi and tarsi being of a brownish-yellow hue. They are furnished fairly with long, tolerably strong, spines of different lengths. The femora of the first and second pairs are slightly granulose. The two posterior pairs are of a pale brownish-yellow colour, and also spinose.

The *falces* are short, strong, subconical, vertical, and like the cephalothorax in colour.

The *palpi* are short, similar in colour to the tarsi and metatarsi of the anterior legs; the radial is rather shorter than the cubital joint, and has a long, strong, tapering black spine near its inner side in front, and its outer fore extremity is produced into a short, slightly curved, pointed, tapering, rather prominent apophysis. The digital joint is of moderate size, and the palpal organs, which are simple, appear to be encircled with a double-coiled spine.

The *maxillæ*, *labium*, and *sternum* are normal in form and rather paler in colour than the cephalothorax.

The *abdomen* is rather elongate-oval, flattish convex above, of a somewhat coriaceous texture, and covers the underparts like a shield. A few long, strong, prominent, spine-like bristles are placed at intervals round the anterior margin (but most of them are broken off in the only male example seen). The upperside is of a luteous colour, slightly mottled with whitish and bordered with a narrow whitish border. Each side of the fore half has a rather broad dusky submarginal band, and a transverse bar of the same hue, broken in the centre, runs across a little way behind the middle. The posterior extremity has a narrow black margin.

The *female* is much larger than the male, and the sides of the cephalothorax are more broadly banded with a darker hue than the upper part.

The height of the clypeus is very near equal to half that of the facial space; and there are some long strongish bristles, chiefly on the sides of the caput and along the lower margin of the clypeus. The legs are similar in colour to those of the male, excepting that they have a broad pale annulus on the hinder half of the tibiæ of the first and second pairs.

The *abdomen* is large, the upper surface flattish, of a subpentagonal form; the fore extremity and posterior angles much rounded. The upperside is yellow-brown, with a broad marginal cream-white band and two spots of the same colour in a transverse line across the middle. The marginal band is broadest behind,

but does not extend round the posterior part, which, with the underside, is of a dark blackish-red-brown, the sides being a little paler, but traversed obliquely by deeper coloured rugæ.

The spinners are short and of a dark reddish-brown colour.

*Hab.* GUATEMALA, Chiacam (♀), Cahabon (♂) (*Sarg*).

This spider is nearly allied to *S. maculosa*; but the anterior legs of the male are proportionately shorter and stouter, the abdomen has no dark spots on its upperside, the palpi differ in their structure, and the eyes have a slightly different relative position.

From Mr. Sarg's note on the male it seems that the colour of the tarsi and metatarsi of the first two pairs of legs is pale green, and the whole of the third and fourth pairs olive-green, the abdomen also is pale olive-green, showing how little in some cases the colours of the preserved specimens can be relied upon as representing the spider in life. In his note upon the preceding species, *S. maculosa*, Mr. Sarg does not specially mention its colours, but remarks its near general resemblance to *S. affinitata*, excepting the dark spots on the abdomen; whence we may conclude that some portions also of *S. maculosa* are in life greenish as in the present species.

### **Synæma socia,** sp. n.

*Adult male*, length $1\frac{1}{2}$ lines.

The *cephalothorax* is of a dull brownish-yellow colour, with a broad thoracic marginal border well defined, broadest in the middle, and of a deep reddish-brown hue. The surface is furnished with a few long, tolerably strong, tapering black bristles.

The *eyes* are in the usual position,—two very nearly concentric, strongly curved transverse rows, the convexity of the curves directed forwards. The fore laterals are rather larger than usual. They are seated on rather pale tubercles, and have each a narrow, clear yellow margin. Those of the anterior row are very nearly equidistant from each other, if anything the interval between those of the central pair is greater than that between each of them and the lateral next to it; the interval between the hind central pair is considerably less than that between each of them and its contiguous lateral eye. The four central eyes form an oblong rectangular trapezoid.

The *legs*, 2, 1, 4, 3; those of the first and second pairs are long, rather slender, those of the second pair being a little the longest. The femora are granulose, and with the genua and tibiæ are dark yellow-brown, the tibiæ having an obscure annulus of a paler hue near its base; the metatarsi and tarsi are yellowish. They are armed (excepting the tarsi) with many longish black spines, these being most numerous on the tibiæ. The two hinder pairs are short and yellow.

The *falces* are moderate in length and strength, vertical, and similar in colour to the cephalothorax.

The *palpi* are short, similar to the posterior legs in colour. The cubital joint is slightly longer, but less strong, than the radial; it has a long, strong, tapering, slightly curved, prominent black spine above at its anterior extremity. The radial joint has, along with some others of lesser size, a black tapering spine on its inner side nearly equal in size to that on the cubital joint; also at its outer extremity is a rather small, slightly curved, sharp-pointed, somewhat spine-like, apophysis. The digital joint is of moderate size and yellow-brown hue, clothed with hairs and bristles. The palpal organs are simple, and encircled by a black spine.

The *maxillæ*, *labium*, and *sternum* are of normal form, the two former of a pale yellowish-brown colour, the latter yellow.

The *abdomen* is oval, with the upperside rather flattened convex, shining, and somewhat shield-like; its colour is pale luteous-yellow, with three transverse rows of dark red-brown spots, four in each row, and each bearing a long, strong, tapering black bristle; between the hinder row of spots and the spinners are two black patches in a transverse line, and another just above the spinners. The sides of the abdomen

are marked with short fine black lines or streaks, running somewhat obliquely. The underside is pale luteous, with a curved bar of short fine black lines in front of the spinners.

*Hab.* PANAMA, Bugaba (*Champion*).

## Synæma profuga, sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

The *cephalothorax* is of ordinary form; its colour is dull yellow-brown, with somewhat of an olive tinge (probably in life the colour is greenish); furnished with a few longish black tapering bristles.

The *eyes* are on greyish tubercles. Those of the central pair of each row are further from each other (though not very much) than each is from the lateral eye of the same row adjacent to it. The four central eyes form a trapezoid whose anterior side is distinctly shorter than the posterior, and the sides are very nearly equal to the anterior side. The height of the clypeus is nearly equal to half that of the facial space.

The *legs* are rather long, moderately strong. The femora, genua, and tibiæ of the first and second pairs are of a deep rich slightly reddish-brown, with a rather distinct dull orange-yellow annulus at the base of the tibiæ; the metatarsi yellow, appearing somewhat spotted owing to the red-brown bases of the spines; the tarsi yellow, with a distinct black claw-tuft. The femora, genua, and tibiæ are armed with spines, strongest, and some of them of a pale hue, on the tibiæ. The legs of the two posterior pairs are short and yellow.

The *falces* are tolerably long, strong, vertical, and similar in colour to the cephalothorax.

The *palpi* are short, and similar to the two hinder pairs of legs in colour.

The *maxillæ* and *labium* are normal in form and similar in colour to the falces. *Sternum* yellow.

The *abdomen* is rather large, much broader behind than in front, of the work-bag-shape common in this and some allied genera, tolerably convex above, and well rounded both before and behind. It is of a dull luteous colour, more or less marked in parts above and on the sides with cretaceous white, also with black and red-brown markings, leaving more or less distinctly defined the usual angulated Thomisid pattern on the upperside. The sides, towards the under surface, are marked with black parallel streaks, and on the underside is a broad, central, longitudinal, somewhat shield-shaped band. The spinners, which are yellow-brown, are encircled with a black stripe; probably much variety exists in different examples in the abdominal pattern according to the extent and continuity or otherwise of the darker markings on the upperside. The genital aperture is small, but of characteristic pattern.

*Hab.* PANAMA, Bugaba (*Champion*).

## Synæma adjuncta, sp. n.

*Adult female*, length $2\frac{2}{3}$ lines.

The *cephalothorax* is of a yellow-brown colour, rather darker in the ocular region and on the clypeus. The sides and hinder slope of the thorax, which is much impressed, are deep rich reddish-brown.

The *eyes* are on greyish tubercles. The central pair of the anterior row are a little further from each other than each is from its adjacent lateral eye, while those of the posterior row are equidistant from each other. The four central eyes form very nearly a square, the hinder side being slightly longer than the rest. The height of the clypeus is nearly equal to half that of the facial space.

The *legs* are short, moderately strong, 2, 1, 4, 3. Those of the first two pairs have the femora, genua, and tibiæ dark yellow-brown, paler in front of the femora, which are also closely, though minutely, granulose. The tibiæ have a pale annulus near the hinder extremity (or base). The metatarsi and tarsi are brownish-yellow, paler than the tibiæ. Spines on the femora, genua, tibiæ, and metatarsi, but not very strong. The two posterior pairs are much the shortest, and their colour is yellow.

The *falces* are rather long, moderately strong, vertical, and a little prominent near their base in front; they are similar in colour to the clypeus and ocular region.

The *palpi* are short, slender, and similar in colour to the posterior legs.

The *maxillæ* and *labium* are yellow-brown, with a pale marking at the base of each, that on the labium being an isosceles triangle, the others somewhat oblong.

The *sternum* is yellow, indistinctly bordered with yellow-brown.

The *abdomen* is large, broader behind than in front, where it is well rounded; the upperside is very convex. It is of a pale luteous colour, closely freckled above with white cretaceous spots; near the middle of the upperside is a large curvilinear chevron or circumflex-accent marking of a dark brown colour, the angle directed forwards; this is followed towards the spinners by three other much smaller and less conspicuous markings. The underside is yellow-brown, darkest along the middle, the spinners dark yellow-brown. Genital aperture small and very inconspicuous, but of characteristic form.

*Hab.* PANAMA, Volcan de Chiriqui (*Champion*).

## DIÆA, Thorell.

### **Diæa puta,** sp. n.

*Adult female*, length $2\frac{2}{3}$ lines.

The whole of the anterior portion of this spider is of a pale yellow colour.

The *eyes* are on greyish tubercles, compactly placed in the form of a crescent. The anterior row is much the shortest. The fore central pair are smallest, and separated from each other by two diameters' interval, but are nearer than that to the laterals. The fore laterals are considerably the largest. The intervals between those of the posterior row are equal. The four central eyes form a square whose anterior side is distinctly shorter than the others. The clypeus is less than half the facial space in height; it has two spine-like bristles projecting forwards, with converging points in the middle close to its lower margin.

The *legs* are short, 1, 2, 4, 3, and rather strong. Those of the first and second pairs do not much exceed the length of the spider, and are very nearly equal in length. The tibiæ are armed beneath with four, and the metatarsi with three, pairs of strong spines, besides a few others of very small size. The two posterior pairs are much the shortest, and have a few fine spines only.

The *falces* are short, strong, vertical, and conical in form.

The *labium* is short-oval. It is of a pale luteous colour, thickly mottled with cretaceous white spots. The genital aperture is very characteristic; in form it is somewhat kidney-shaped.

*Hab.* PANAMA, Bugaba (*Champion*).

## MISUMENA, Latreille.

### **Misumena pascalis,** sp. n.

*Adult female*, length 3 lines.

The *cephalothorax* is yellowish-brown, with two broad bright red-brown parallel bands—one on each side of the caput, ending just beyond the thoracic slope; at the middle in front of the thoracic junction, between these two bands, is a conspicuous **X**-shaped yellow-white marking.

The *eyes* are very small; the fore laterals slightly the largest. All are on greyish-yellow tubercles, those of the lateral pairs the strongest. The four central eyes form a square whose anterior side is the shortest. Taken in two transverse rows the eyes of each row are equally separated from each other. The height of the clypeus is equal to half that of the facial space.

The *falces* are rather small, nearly vertical, conical, and similar in colour to the cephalothorax.

The *legs* are short, moderately strong, 1, 2, 4, 3. Their colour is dull orange-yellow. Those of the first and second pairs have the femora marked with two longitudinal broadish white bands underneath, and an obscure whitish line along the upperside of the tibiæ. The extremities of the genua and tibiæ are suffused with rusty-brown, but scarcely amounting to annulation. Beneath the metatarsi are four, and beneath the tibiæ six, pairs of spines, but not very strong ones; there are also four spines on the upperside of the femora of the first pair—three in a longitudinal row and one behind. The spines on the two hinder pairs, which are paler in colour than the others, are very small and irregularly disposed.

The *abdomen* is large, of a subpentagonal form, much the broadest behind, the angles rounded. It is thickly covered with white cretaceous spots, with a broad, deep brown band round the fore half of the upperside, narrowest in the middle, and a central longitudinal, somewhat oval, patch of deep brown is followed by some irregular oblique stripes of brown and black-brown on the hinder half, their obscure extremities

meeting an oblique irregular stripe running laterally on each side from above the spinners forwards. The genital aperture is small and inconspicuous, but of characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Misumena pallida,** sp. n.

*Adult female*, length $3\frac{1}{2}$ lines.

The *cephalothorax* is of a pale dull yellow-brown hue. The eye-tubercles and the rest of the ocular area white, and a strong, somewhat **V**-shaped white marking close to and on the thoracic junction. The upper surface is also furnished, but not thickly, with some longish prominent spine-like bristles. The clypeus is slightly less in length than half the facial space, and has a row of prominent bristles along its lower margin.

The *eyes* are small, but in the normal position. Those of each of the fore and hinder rows respectively are equally separated one from another. The length of the trapezoid formed by the four central eyes is rather greater than its width behind, and the anterior side is rather shorter than the posterior.

The *falces* are moderate in length and strength. Similar in colour to the cephalothorax, but mostly white in front.

The *legs* are short, tolerably strong, similar to the cephalothorax in colour; the anterior sides of the femora and genua white. The metatarsi of the first and second pairs of legs have seven pairs of strongish, but not very long, spines beneath them; the tibiæ of the first pair of legs have five pairs of spines, but those of the second only two pairs. The two posterior pairs of legs have a few very fine spines irregularly disposed.

The *maxillæ*, *labium*, and *sternum* (as well as the under sides of the coxal and exinguinal joints of the legs) are more or less suffused with white.

The *abdomen* is yellowish-white, large, of a somewhat pentagonal form, furnished with a few prominent black bristles on the upperside, and has some dusky markings on the hinder part, representing faintly the normal oblique bars or broken chevrons. The genital aperture is tolerably conspicuous and of characteristic form.

*Hab.* PANAMA, Veraguas (*Boucard*).

## **Misumena conjuncta,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

The *cephalothorax* of this spider is reddish-yellow-brown, the sides and hinder part of the thorax yellow, and has a longish, somewhat **X**-shaped, cream-yellow marking near the thoracic junction.

The *eyes* are small, but in the ordinary position, and on greyish tubercles; the interval between the two fore central eyes is slightly greater than that between each and the fore lateral next to it; the eyes of the posterior row are equidistant from each other. The four centrals form a square whose fore side is shorter than the rest. The height of the clypeus equals half that of the facial space.

The *falces* are rather small, vertical, straight, and conical, and similar in colour to the cephalothorax.

The *legs* are rather short, 1, 2, 4, 3, not very strong, the two anterior pairs of a reddish-yellow colour, with six pairs of spines beneath the metatarsi, and four pairs of spines beneath the tibiæ, all small, the former stronger; on the femora are four spines. The two posterior pairs of legs are yellow, with a few irregularly disposed very fine spines.

The *maxillæ*, *labium*, and *sternum* are yellow.

The *abdomen* is considerably broader towards the hinder part than in front, but not so pentagonal in form as in *M. pascalis*. It is of a dull yellow-brownish hue, marked on the sides forwards and towards the spinners with an irregular black band or elongate patch; on the hinder part of the upperside is a somewhat broken diamond-shaped patch, formed by slight black markings. The sides are also mottled with yellowish-white cretaceous spots. The genital aperture is very small and inconspicuous, but of characteristic form.

*Hab.* PANAMA, Veraguas (*Boucard*).

This spider is nearly allied to *M. pascalis*, but differs in its characteristic markings, and also in the structure of the genital aperture.

## STROPHIUS, Keyserling.

### **Strophius hirsutus,** sp. n.

*Adult female*, length slightly over 2 lines.

The *cephalothorax* is dark, slightly reddish-brown, narrowly margined with white, and covered thinly, chiefly towards the sides and in the ocular region, with minute tubercles or granulosities, each emitting a coarse spiniform bristle. The clypeus looked at in profile projects on a similar slope to that of the ocular area; it is equal in height to half that of the facial space, and has a row of prominent bristles on its fore (or lower) margin.

The *eyes* are small, excepting the fore laterals, which are considerably the largest. They are placed in two transverse nearly parallel rows; the anterior row being the shortest, but not greatly so. Each fore central eye is scarcely more than a diameter's distance from the fore lateral eye on its side; the interval between the two fore centrals being at least three times as large. The two hind central eyes are rather wider apart than the fore centrals, and the four form a transverse oblong nearly twice as long as it is broad. The eyes are all narrowly margined with yellow, and those of the lateral pairs are seated on moderately strong tubercles.

The *legs* are moderately strong and rather short; the difference in length between 1–2 and 3–4 is not nearly so great as in the allied genera *Xystious*, *Runcinia*, *Synœma*, &c. They are nearly similar in colour to the cephalothorax, but gradually become rather paler towards their extremities. Those of the two hinder pairs are marked with a straight, longitudinal white line along the upperside. Slight traces of a similar line are visible in parts on the first and second pairs of legs. They are nearly destitute of spines, excepting a few not very strong ones on the femora (which are rather granulose), and one or two at the extremities of the tibiæ of the first and second pairs of legs.

The *falces* are not very powerful; they are similar in colour to the cephalothorax, and furnished in front somewhat thickly with short strong prominent bristles.

The *palpi* are short, and similar to the legs in colour.

The *maxillæ* are similar to the falces in colour, and are armed with a row of spine-like bristles on the outer margins and extremity of their anterior half.

The *sternum* is rather darker, and its surface is slightly rugulose.

The *abdomen* is very Thomisiform, broadest behind and moderately convex above; it is covered rather thickly with prominent spine-like bristles. The upperside is deep brown, nearly black behind, with a broad cream-white transverse band near the middle; this band is continued obliquely over the sides, where it becomes of a yellow-brownish hue. Conspicuous on this band near the middle of the abdomen are two deep red-brown round impressed spots in a transverse line, and a little behind them is a largish nearly white patch forming a protuberance of the band itself; on the fore margin of the transverse band are two similar but smaller impressed spots nearer together. The sides are obliquely rugulose and spotted with white, and there are also a few scattered white spots on the hinder part of the abdomen near the spinners; in one example these spots form some broken transverse curved lines; the underside is dark brown. The genital aperture is not very conspicuous, but characteristic in form.

*Hab.* PANAMA, Bugaba (*Champion*).

## BUCRANIUM, Cambridge.

### **Bucranium spinigerum,** sp. n.

*Adult female*, length rather over 2 lines.

The *cephalothorax* is of a deep rich reddish-brown colour, strongly tuberculose and its surface densely granulose; the caput is very broad, the lower fore corners rather prominent, the fore margin indented or somewhat shallow angulated. The height of the clypeus exceeds half that of the facial space. The ends of the ocular area are very tuberculosely and irregularly prominent and divergent. On the upperside of the caput and sides of the thorax are eight or nine subconical spine-bearing prominences or tubercles of different sizes: the two largest are in a transverse line just at the thoracic junction, and each bears two

divergent sharp pale spines, longer than the tubercles; the rest have only one spine each, but of a similar length and character. On the fore part of the caput, the lower margin of the clypeus, and ocular prominences are also some short prominent spines issuing from tubercles.

The *eyes* are small, not very unequal in size, and occupy a wide area. Each hind lateral eye is just behind, and near the extremity of, the large divergent tubercular prominence above mentioned; each fore lateral being near its base in front; the fore centrals form a much longer line than the hind centrals, and with the latter describe a transverse oblong figure whose width is double its length on the posterior side.

The *legs* are short, not very strong, nor greatly differing in length, 1, 2, 4, 3, dark brown, somewhat annulose with yellowish markings and annuli. The whole of the metatarsi of the first and second pairs, and the lower half of the femora of the third and fourth pairs, are pale yellow. The femora are tuberculose, the tubercles having the appearance of being once armed with spines, now broken off.

The *palpi* are short, strong, of a yellow-brown colour, the humeral joint deep blackish-brown and armed beneath with short tuberculous black spines.

The *falces* are of moderate length and strength, and of a yellowish-brown colour, armed in front with a few short spines.

The *maxillæ*, *labium*, and *sternum* are deep dark brown. The maxillæ are long and narrow, almost close together, and bristly, the labium being acuminate, almost similar to that of *Aphantochilus*, Cambr.

The *abdomen* is Thomisiform, much broadest and rounded behind, tolerably convex, though rather flattened above. Its upperside is of a dull brownish-yellow colour, with two largish round black impressed spots in a transverse line near the middle, and a little way in front of these, but nearer together, are two other much smaller spots; just in front of these last and describing nearly a square are four conspicuous, conical, amber-coloured diaphanous tubercles, each bearing an erect, sharp, tapering pale spine, a little longer than the height of the tubercle. A marginal row of similar but smaller spinigerous tubercles runs round the anterior side of the abdomen, and there are also several others of a similar kind on each side of the central square; besides these, towards the hinder part are some small blackish bristle-bearing granulosities. Just behind each of the largest central round black spots is a pale curved somewhat semilunar patch merging laterally. The convexity of the curves is directed backwards, and the anterior margins of the patches are white. The sides and underside of the abdomen are dull brownish, the former slightly spotted or freckled with whitish. The genital aperture is very minute and inconspicuous, but of characteristic form.

*Hab.* Panama, Bugaba (*Champion*).

This spider, though nearly allied to *Bucranium taurifrons*, Cambr. (P. Z. S. 1881, p. 772), from the Amazons, is quite distinct from it.

## THANATUS, C. L. Koch.

### **Thanatus punctiger,** sp. n.

*Adult female*, length $3\frac{2}{3}$ lines.

The *cephalothorax* is yellow tinged with orange-brown, and clothed with fine grey pubescence; the sides of the thorax are marked (pencilled in a somewhat reticulated fashion) with deep black-brown; the caput being less thickly marked, a dark line running backwards from each hind lateral eye, and a few spots arranged in a somewhat cruciform pattern at the thoracic junction. The clypeus equals half the facial space in height, and has a few prominent bristles towards its lower margin.

The *eyes* are small, the hind laterals rather the largest. Those of the posterior row are separated from each other by as nearly as possible equal intervals, as are also those of the much shorter anterior row. The interval between the lateral pairs on either side is rather greater than that between each hind lateral eye and the hind central next to it. The interval between the fore centrals is slightly greater than that between each and the fore lateral eye on its side; and the interval between each hind central eye and the fore central, not next to it but on the opposite side, is equal to that between the eyes of the posterior row.

The *legs* are moderately long, apparently 2, 1, 3, 4, rather slender, yellow, thickly spotted on the uppersides and in front, especially those of the first and second pairs, with small red-brown and black spots. The difference in length between 1, 3, and 4 is very slight. They are armed with spines on the femora, tibiæ, and metatarsi, those beneath the tibiæ and metatarsi being long and arranged in pairs. There is no scopula beneath the tarsi.

The *falces* are moderately long and strong, straight, similar in colour to the cephalothorax, and with a few similar spots in front.

The *palpi* are similar to the legs in colour and markings.

The *maxillæ*, *labium*, and *sternum* are yellow.

The *abdomen* is elongate-oval, of a dull luteous colour, thickly covered with, mostly coalescing, cretaceous spots, and much marked and spotted on the upper part and sides with dark chocolate-brown; these markings form a kind of diffused broad longitudinal band on each side of the median line, broken into somewhat oblique bars towards the hinder extremity. The genital aperture is small but of characteristic form. The abdomen is very thinly clothed with pale pubescence and a few short bristly hairs.

This spider is very nearly allied to *Tibellus*, but on the whole comes, probably, more naturally into the genus *Thanatus*.

*Hab.* GUATEMALA, Chiacam in Vera Paz (*Sarg*).

In his notes, Mr. Sarg speaks of this spider as having the ground-colour of the abdomen "pinkish-white." The pink tinge has, however, disappeared by preservation in spirit of wine.

## SPHÆROBOTHRIA, Karsch.

### Sphærobothria hoffmanni.

*Sphærobothria hoffmannii*, Karsch, Zeitschr. ges. Nat. lii. p. 536, t. 7. figg. 1, 2 (1879).

*Adult female*, length 20 lines; *adult male*, length 15 lines.

The *cephalothorax* is a little longer than broad, truncate in front, and moderately convex above. The caput does not rise much nor abruptly from the thoracic level, and the normal indentations are fairly but not very strongly marked. The thoracic indentation is circular and filled up by a kind of chitinous plug of a subconical form. (This is a most remarkable and conspicuous feature, and had determined me to base a new genus upon it, before I was aware that it had been so dealt with by Dr. Karsch.) The cephalothorax is of a dull yellow-brown colour, clothed with coarse grey-brown pubescence.

The *eyes* are small, seated on a small oval hump or eye-eminence close to the fore margin of the caput. Those of the anterior row, which run in a straight line transversely over the hump, are separated by equal intervals, and its laterals are apparently a little the largest; behind each of the central eyes of this row, and nearly in a line between it and the hind lateral eye, is an eye of the hind central pair, which are very small. The eyes may therefore be described as in two small groups forming nearly an equilateral triangle at each end of the eye-eminence, from which also some coarse reddish-brown bristles are directed forwards.

The *legs* are moderately long, strong, 4, 1, 2, 3, similar in colour to the cephalothorax; clothed with similar pubescence and long coarse hairs and bristles, some of which have a dull reddish hue. There are a few small spines on the tibiæ and metatarsi (strongest and most conspicuous in the male); and the tarsi and metatarsi have a dense scopula beneath them, reflecting metallic hues; this scopula, however, only extends about halfway along the metatarsi of the fourth pair.

The *palpi* are rather long, strong, leg-like, similar in colour to the legs; the digital joint (of the ♀) has a dense scopula beneath.

The *falces* are strong, prominent, and arched in profile. They are similar in colour to the cephalothorax, and clothed with pubescence and coarse bristles like the legs.

The *maxillæ* are long, divergent, nearly cylindrical, with a small projecting point at their extremity on the inner side. *Labium* short, broad, truncated at the apex, which is nearly as broad as the base.

The *sternum* is small, oval. The maxillæ, labium, and sternum are similar in colour and clothing to the cephalothorax.

The *abdomen* is of moderate size, oval, of a deep dull brown-black, and clothed densely with hairs and long bristles, some of which are of a reddish hue. The spinners are four in number, the superior ones the longest, but not very long, upturned, 3-jointed, or (counting the base) 4-jointed; the inferior spinners short, 1- or 2-jointed, and placed immediately at the inner side of the base of the others.

The *male* resembles the female in colour and general appearance, but the legs and superior spinners are longer, as are also the spines on the legs; beneath the fore extremity of the tibiæ of the first pair, and directed rather inwards, is a strong curved projection, densely clothed with bristles. The palpi of this sex have the radial joint nearly double the length, and stronger than the cubital, furnished with spines, hairs, and bristles, the latter longest and most numerous underneath; digital joint short; the palpal organs consist of a basal bulb produced gradually in a pyriform curved shape, and ending in a rather obtuse point directed outwards. The colour of these organs is black-brown on the convex, and red on the concave side.

*Hab.* Costa Rica (*Rogers*).

The genus *Sphærobothria* appears to come near *Eurypelma*, Koch, and may be easily distinguished by the remarkable subconical plug with which the thoracic indentation is closed up.

Numerous examples of the female, and also two males, of this remarkable spider were contained in the collection made by Mr. H. Rogers in Costa Rica in 1878. The male is new to science, the genus and species having been established by Dr. Karsch upon the female only. Dr. Karsch's specimen also came from Costa Rica.

## EURYPELMA, Koch (Auss.).

### **Eurypelma mesomelas,** sp. n.

*Adult male*, length 21 lines, to end of falces 25 lines; length of cephalothorax nearly 12 lines; breadth, a little over 10 lines.

The *cephalothorax*, the *abdomen*, and the *femora* of all the legs are covered with a dense, smooth, velvety-black-brown pubescence; the cephalothorax more or less tinged with brown. The fore extremities of the femora are furnished thickly with foxy-red hairs, as also are the genua and portions of the other joints, especially on the upper sides of the first and second pairs of legs; these other joints have also numerous black and brown hairs in parts, with which are mixed some very long, prominent, foxy-red bristles. The tarsi are all dull blackish, and beneath them and the metatarsi is a dense scopula. The tibiæ and metatarsi are armed with not very strong spines. At the fore extremity of the tibiæ of the first pair of legs on the inner side, rather underneath, are two strong, prominent, processes densely clothed with bristly hairs. The abdomen is thinly furnished towards the hinder part with long foxy-red bristles.

The *eyes* are small, seated on a rather small, but distinct, transverse-oval eminence, close to the fore margin of the cephalothorax. The two central eyes are placed in a transverse line near the middle of the eminence, the interval between them being distinctly more than a diameter. The other eyes are situated three on each side rather close together; the two posterior eyes of these three are contiguous to each other, and the anterior eyes (which are each separated from the central eye next to it by a space equalling the diameter of the latter) are the largest of the eight.

The *palpi* are similar to the legs in colour, strong, and rather long; the humeral joints are black-brown like the femora of the legs; the other joints are more or less bright foxy-red; the radial joints are longer and stronger than the cubital, furnished with spines, and numerous long bristly hairs beneath; the digital joint is small, and cleft at its fore extremity; the palpal organs consist of the usual somewhat

pyriform bulb, of a rich black-brown colour; the stem (or anterior portion) enlarging into a flattish, somewhat oval form, whose rounded obtuse extremity has a semitransparent red rim.

The *falces* are long, strong, roundly arched in profile, and densely clothed with foxy-red hairs and bristles, mixed with a few of a browner hue. The fang is long, strong, curved, and black. The cephalothorax is oval in form, narrowed and truncated at the caput, and longer than broad. The relative length of the legs, which are robust and rather long, is 4, 1, 2, 3, but the actual difference in length is not great.

The *maxillæ* are long, straight, divergent, with a prominent angular point on the inner side of the anterior extremity; they are of a red-brown colour, their inner margin being clothed with a strong fringe of red bristly hairs, as also are the undersides of the falces. The *labium* is almost quadrate, but rather broader at the base than at the apex, which is truncated.

The *sternum* is small, oblong-oval, about double as long as broad, and (with the basal joints of all the legs) densely clothed with deep brown pubescence, mixed with longer, blackish, bristly hairs. The spinners are four in number, the superior pair the longest, moderately long and upturned (these parts were injured by the opening and stuffing, for preservation, of the abdomen, so that their exact length and joints cannot be accurately seen).

*Hab.* Costa Rica (*Rogers*).

## DAVUS, gen. nov.

*Cephalothorax* as broad as long, narrow and truncate at the caput, very broad behind. Caput scarcely raised above the thorax; thoracic indentation roundish, but not particularly strong or conspicuous.

*Eyes* on a distinct oval eye-eminence; a line drawn across close below the central pair would just pass between them and the fore laterals, which are larger than the centrals, the hind lateral and hind central eye on its side (which last is the smallest and of irregular shape) are almost or quite contiguous to each other.

*Legs* short, very robust, without spines, or, if any, a very few fine ones beneath the metatarsi; they are much injured in the single specimen obtained, but judging by the femora, which are all entire, their relative length is 4, 1, 2, 3, though the actual difference is small; beneath the tarsi and a small portion of the metatarsi of those legs which are tolerably perfect is a scopula.

*Falces* strong, prominent, somewhat abruptly bent (in a rounded form) in profile.

*Maxillæ* long, straight, divergent, and with a very small prominent point at the extremity on the inner side.

*Labium* longer than broad, of a somewhat oblong form.

*Sternum* of moderate size, oval, broadest behind, and hollow-truncate in front.

*Abdomen* small, oval. Spinners 4. Superior pair as long as the tarsi of the second pair of legs.

The nearest allies of the spider for which this new genus is proposed are *Eurypelma*, C. Koch (Auss.), *Lasiodora*, C. Koch, *Lasiocnemus*, Auss., and *Homœomma*, Auss.

### **Davus fasciatus,** sp. n.

*Adult male,* length $7\frac{1}{2}$ lines, to end of falces $8\frac{3}{4}$ lines; length and breadth of cephalothorax $4\frac{1}{2}$ lines.

The *cephalothorax* above and below, the legs, falces, and palpi are dark brown, the cephalothorax clothed with dull yellowish-brown pubescence and hairs. The eye-eminence has some long bristly hairs in front and behind, meeting over the middle. The abdomen is densely clothed with hairs and pubescence, banded with distinct alternate lateral bands of black-brown and foxy-red (whether the bands traverse the upper-side or join into a longitudinal central band cannot be distinctly seen); there are also numerous long bristly hairs of a foxy-reddish colour on its upper surface.

The two central and fore lateral *eyes* form a straight row (looked at from above and a little behind) over the anterior side of the eye-eminence. The hind lateral eye on each side is contiguous to the hind central eye; the latter is smallest and both are of irregular form and bright red colour. The interval between those of the hind central pair is a diameter, and is greater than that between each and the fore lateral eye next to it. The hind central eyes are also almost contiguous to the fore laterals; in fact the eyes form two groups, the eyes of which are exceedingly close together, some being quite contiguous.

The *palpi* are tolerably long and strong; the radial exceeds the cubital joint in length and strength. Digital

joint small. The palpal organs consist of a large roundish basal bulb, produced into a not very long but strongish, curved, tapering sharp-pointed spiny process, almost concealed among the long dense hairs beneath the radial joint.

The tibiæ of the first pair of *legs* are furnished with two strong prominences or spurs clothed with hairs at the fore extremity on the inner side.

*Hab.* Costa Rica (*Boucard*).

This spider is remarkable, not only for the large comparative size of the cephalothorax and its short strong legs, but also for the very distinct pattern on the abdomen.

## MACROTHELE, Ausserer.

### **Macrothele digitata,** sp. n.

*Adult female*, length 8 lines; length of abdomen 5, and of the spinners of the superior pair $6\frac{1}{2}$ lines: *adult male*, length 6 lines; length of abdomen $3\frac{1}{2}$, and of the superior spinners 5 lines.

*Female.* The *cephalothorax* is short, oval, truncated anteriorly, flattened, the caput not rising above the thoracic level, excepting the eye-eminence, which is of moderate size and height, oval, and close to the fore margin of the caput. Normal indentations tolerably strong, and marked by converging dark brown lines, the ground-colour being yellowish-brown, and the surface covered with adpressed silky greyish-yellow pubescence. Thoracic indentation deep, slightly curved, the convexity of the curve directed backwards.

The *eyes* are of tolerable size, disposed in the usual form: two large, round, and prominent, in a transverse line, occupy the middle at the fore part of the eminence; the interval between these is not much more than half a diameter. At about the same distance on each side of these is a group of three others on a tubercle near the base of the eminence; the two outer ones (lateral pair) oval, almost as large as the centrals, and nearly contiguous to each other; the other (hind central) small, oval, and nearly contiguous to the hind lateral eye on its side. These are of a pearly-white hue, the centrals dark grey.

The *legs* are tolerably strong, not very long, 4, 3, 2, 1, of a yellowish-brown colour, marked with deep reddish-brown at the ends of the joints, and clothed with numerous hairs, bristles, and spines (the latter chiefly on the metatarsi and tibiæ, though there are a few near the extremity on each side of the tarsi); each hair, bristle, and spine issues from a minute dark reddish-brown tubercle, giving the legs a closely spotted or speckled look. The tarsi end with two superior curved claws, beneath which is another smaller one, all three pectinated. The tarsi are all long, thin, and devoid of scopula.

The *palpi* are short, strong, and resemble the legs in colour and armature, terminating with a single claw, which is pectinated and slightly curved.

The *falces* are strong, very prominent, and abruptly curved downwards near their extremity in profile; they are of a deep rich red-brown colour, furnished in front with numerous long black bristles. Fang short, powerful, and similar in colour to the falces.

The *maxillæ* are not very long, but broad, straight, and divergent, with a prominent obtuse point at their extremity on the inner side; they are of a red-brown hue, yellow on the inner side, where towards the base are numerous minute red-brown spines or denticles.

The *labium* is very small and short, set almost at right angles to the sternum, deep reddish-brown, with a yellow apex.

The *sternum* is short, oval, pointed behind, truncated before, of a blackish-red-brown colour, furnished with numerous prominent bristles, and with a marginal row of clear roundish yellowish-red-brown spots marking the insertion of each leg.

The *abdomen* is oval, rather convex above, of a dull chocolate-brown hue, thinly covered with yellowish pubescence and some bristly hairs; it is marked on the upperside with two longitudinal rows of fine oblique pale stripes, the last three or four of which meet, and form the ordinary angular bars or chevrons. The four spiracular plates are of a yellowish hue, marked round their inner sides with a half-ring or crescent marking of deep black-red-brown. The spinners of the superior pair are longer than the abdomen, three-jointed, the last joint very long, tapering to a fine point, and palpiform; the inferior ones one-jointed, cylindrical, and shorter than the first joint of the superior pair.

The *male* is of a rather clearer and lighter colour than the female, especially the legs and palpi; the abdomen, however, is as dark, and the oblique lines on it are more distinct; the tibiæ of the first pair of legs are very strong, and at their extremity on the outer side, somewht underneath, is a strong obtuse prominence whose extremity is armed with eight or nine short, strong, divergent spines; the metatarsi of the same pair are bent, and have a conical tooth-like prominence near the middle on the outer side.

The *palpi* are strong, the radial joint somewhat tumid; the digital joint small, but with its outer extremity produced into a long, cylindrical, finger-like projection, armed with several short black spines at and near its termination. The palpal organs consist of a small roundish-oval bulb, gradually produced into a long curved spine, with a fine hair-like termination.

*Hab.* GUATEMALA, Cubilguitz, Chamiquin, Tucuru, Escuintla (*Sarg*).

Mr. Sarg says of this spider that it lives in holes in the ground, near which it makes small, strong, irregular webs, consisting of various floors or chambers. It is a very remarkable species, from the peculiar form of the digital joint of the male palpus, and is, so far as I am aware, the second species only of this genus recorded as yet from the New World.

## PACHYLOSCELIS, Lucas.

### **Pachyloscelis robustus,** sp. n.

*Adult female*, length $10\frac{1}{2}$ lines; to end of falces 13 lines.

The cephalothorax, falces, legs, palpi, and other fore parts are of a rich dark brown colour; in some examples the genua, tibiæ, metatarsi, and tarsi of the two anterior pairs of legs, and occasionally of all the legs, are of a reddish-yellow-brown hue. The abdomen is of a dull but warm brown colour.

The *cephalothorax* is slightly longer than broad; broadest between the insertion of the first and second pairs of legs, and thence narrowing gradually to the hinder extremity. Its surface is very glossy and smooth. The caput is considerably elevated, the hinder part abrupt and rounded, broad and truncated in front; the thoracic indentation is large, deep, strongly curved, the convexity of the curve directed backwards, and at each of its ends is an additional indentation. The thorax is flat, and has a strong depression at the thoracic junction. The height of the clypeus is about equal to the length of a line formed by the fore central pair of eyes.

The *eyes* are eight in number, seated on very slight tubercles, unequal in size, and form a transverse oblong rectangular figure about two and a half times longer (in its transverse diameter) than broad. They may, however, be most conveniently described as in three groups rather widely separated from each other—a central group of two (the smallest) near together in a transverse line, and at some distance on each side a group of three in a triangle formed by the lateral pair and the hind central eye next to it. The hind central eyes are oval and not much, if at all, larger than the fore centrals, and each is separated from the hind lateral eye next to it by about its own diameter's distance. The fore laterals are slightly the largest (though in some examples the hind laterals appear the largest), and are separated from the hind laterals by a space equalling about once and a half their diameter. The interval between the eyes of the central group is about a diameter, and each is separated from the fore lateral on its side by about three diameters of the latter.

*Legs* very short, strong, 4, 3, 1, 2; those of the two hinder pairs considerably the strongest, furnished sparingly with hairs and bristles; the edges of the undersides of the tarsi and metatarsi of the first two pairs are furnished with short strong spines, and on the upperside of the metatarsi of the third pair are two parallel rows of spines. The outer sides of the genua of the fourth pair are thickly covered with very short denticular spines, a few similar ones are also on those of the third pair, with a marginal row of the same at the fore extremity, both of the genua and tibiæ. Each tarsus ends with three strongly curved, simple claws, beneath which is a small group of bristles, though scarcely to be called either a scopula or claw-tuft.

The *palpi* are strong and leg-like, and the undersides of the digital and radial joints are armed with two rows of strong spines.

The *falces* are powerful, prominent, in profile arched; they have a considerable prominence at the extremity on the inner side armed with strong spines.

The *maxillæ* are short, broad, and strong, divergent; at their extremity on the inner side is a distinct conical prolongation or prominence.

The *labium* is a little longer than broad at its base, and of a subtriangular form rounded at the apex, where (as well as on the front surface of the maxillæ) on the inner side are numerous short denticular spines.

The *sternum* is of a somewhat elongated pentagonal form, broadest behind, and strongly impressed along the middle.

The *abdomen* is short-oval, of moderate size, rather convex above: the spinners, four in number, are short, the upper pair very strong, 4-jointed, the lower pair small and 2-jointed. The spiracular plates 4, and in ordinary position.

*Hab.* PANAMA, Veraguas (*Boucard*).

## TMARUS, Simon.

### **Tmarus ineptus,** sp. n.

*Adult female*, length $2\frac{1}{4}$ lines.

The *cephalothorax* is short, broad, oblong-oval, truncate in front just above the falces; sides dark yellow-brown, with pale converging broken lines. The eye-area and clypeus are marked and mottled with yellow-brown and whitish, and this is continued in a tapering form to the hinder extremity; the central longitudinal band is constricted at the beginning of the hinder slope, and has a fine prominent point there on each side. The surface of the cephalothorax is thinly covered with minute tubercles, from each of which issues a strong prominent bristle. The height of the clypeus is half that of the facial space.

The *eyes* are in the usual position, and occupy the whole width of the caput. Those of the lateral pairs are much the largest, the anterior of each pair being the larger of the two. They are seated on large whitish tubercular prominences of a somewhat truncated conical form, strongly globose towards the base. The fore centrals are the smallest of the eight, and are considerably nearer to each other than those of the hind central pair. The interval between those of the fore central pair is equal to that between each and the hind central eye opposite to it, and the interval between those of the hind central pair is less than that between each and the hind lateral eye next to it. The four central eyes are also on small tubercles.

The *legs* are short; the first pair is slightly longer than the second. The third and fourth pairs are much the shortest, and as nearly as possible equal in length. They are all of a pale brownish-yellow colour, broadly striped longitudinally with cream-white, and the white bands are marked with roundish chestnut-brown spots; these are most marked on the first and second pairs, of which the fore extremities of the metatarsi are marked with a small black-brown annulus. The tibiæ and metatarsi of the first two pairs are armed with spines issuing from slight tubercles; of these spines the chief are arranged in three pairs under each tibia and four under the metatarsi, forming two longitudinal parallel rows. All the femora have some spines on the upperside. The tarsi end with two curved pectinated claws.

The *palpi* are small, short, and similar to the legs in colour.

The *falces* are small, short, subconical, and similar in colour to the clypeus.

The *maxillæ* and *labium* are similar to the legs in colour.

The *sternum* is cream-whitish, narrowly margined with yellowish-brown.

The *abdomen* (looked at from above) is of somewhat subtriangular form; the hinder part is elevated and terminates in a strong subconical prominence, from the base of which the hinder slope to the spinners is straight and rapid. The colour is dull yellowish, marked and mottled with cream-white and brown, the former chiefly distributed along the middle of the upperside. It is thinly sprinkled above and on the sides with minute deep red-brown tubercles, from each of which issues an erect blackish spine-like bristle. The genital aperture is small but of a characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## Tmarus mundulus, sp. n.

*Adult female*, length $1\frac{3}{4}$ lines.

This spider bears a general resemblance to *T. ineptus*; but the legs are shorter, their armature is different, the clypeus is higher, the markings on the cephalothorax and abdomen differ, and the form of the genital aperture is quite distinct.

The *cephalothorax* is dark yellow-brown, paler behind the eyes, in a somewhat subtriangular form margined and bisected longitudinally with cream-yellow lines; the hinder angle is produced backwards in a narrow cream-yellow band abruptly truncated just behind the thoracic indentation. The sides of the thorax are marked with converging cream-yellow lines; and the clypeus, which is distinctly higher than half the facial space, is much suffused with cream-yellow. The surface is thinly furnished with not very strong prominent bristles.

The *eyes* are like those of *T. ineptus*, excepting that the line formed by those of the fore central pair is distinctly shorter than that formed by each and the hind central eye on its side; in fact, the sides and hinder side of the figure formed by the four central eyes are equal, whereas in *T. ineptus* the fore side and sides of this figure are equal.

The *legs* are short, yellow-brown, 2, 1, 4, 3; 2 and 1 scarcely appearing to differ in length, and 3 being a little shorter than 4. They are but faintly marked with whitish; and the spines under the tibiæ of the first and second pairs are four in number, in two pairs, and there are three pairs beneath the metatarsi.

The *falces* are moderately long and strong, subconical, and about equal to the height of the facial space in length; they are of a dark yellow-brown colour, marked more or less with creamy-whitish in front.

The *palpi* and *maxillæ* are similar in colour to the legs.

The *labium* is dark yellow-brownish, and the *sternum* is of a slightly lighter hue.

The *abdomen* is subpentagonal, much broader behind than in front, and has a small subconical eminence at the top of the posterior slope, which last runs down nearly vertically to the spinners; its colour is whitish above and on the sides, mottled and marbled with yellow-brown; there is also a large, tolerably well defined yellow-brown patch on each side at the fore extremity and on each side just behind the subconical eminence. The underside has a broad central longitudinal dull yellowish-brown band from end to end. The upperside is covered sparingly with small prominent bristles. The genital aperture is small but of characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## Tmarus corruptus, sp. n.

*Adult female*, length 3 lines.

The *cephalothorax* is of the ordinary form. The height of the clypeus slightly exceeds half that of the facial space. It is of a yellow-brown colour, marked with converging cream-white lines defining the caput and thoracic segments. The caput is much suffused with whitish, and towards the margins of the thorax there are also some irregular whitish mottlings.

The *eyes* are normal in respect to their relative size, lateral tubercles, and general position. Those of the anterior row are separated by equal intervals. The hind central pair are nearer to each other than each is to the hind lateral eye on its side. The four centrals form nearly a rectangle whose anterior side is slightly shorter than the sides, and these last are a little shorter than the hinder side.

The *legs* are moderately long and not very strong, 1, 2, 4, 3; there is little, if any, difference between the first and second pairs, but the third are a little longer than the fourth. They are of a pale yellow colour very slightly tinged with brown, and there is a broad whitish longitudinal band mottled with greyish-brown spots on the undersides. On the femora of the first and second pairs are, besides some others, three spines in a longitudinal row on the anterior side. There are also three pairs of spines beneath the tibiæ of those two pairs of legs, and four pairs beneath the metatarsi. All these spines spring from minute blackish tubercles, and give the legs a spotted appearance.

The *falces* are moderate in length, not very strong, yellow-brown at the base, whitish beyond and on the inner side.

The *maxillæ* are dull whitish; the *labium* rather browner; and the *sternum*, which is more oval than in many other species of the genus, is yellowish-white thickly spotted with greyish-brown.

The *abdomen* is subpentagonal, broad, and well rounded on the sides behind, and with a strongish blunt subconical prominence at the middle of the posterior extremity; from the base of the prominence to the spinners the hinder slope is abrupt and of rather considerable extent. The upperside and sides are whitish, with a broad blackish longitudinal central band above and an oblique blackish stripe near the middle of each side. The underside has a central black longitudinal stripe flanked on either side by a white one; the white stripes are spotted with dark grey. (Specimens in better condition than the only one as yet seen of this species would probably show a more distinct pattern on the abdomen than that above described.) The genital aperture is of moderate size and characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Tmarus intentus,** sp. n.

*Adult male*, length 1½ lines.

The *cephalothorax* is of normal form; the height of the clypeus is equal to half that of the facial space. The cephalothorax is of a yellow-brown colour, marked with deep red-brown and converging whitish lines thickening to stripes on the sides of the thorax; three of these lines run backwards from the middle and outer sides of the ocular area, and from their point of convergence at the thoracic junction a broad well-defined white band runs to the extremity of the hinder slope, the rest of which is deep red-brown; several minute scattered red-brown tubercles are visible on the upperside, but the spines with which they had once probably been surmounted have almost all been broken off.

The *eyes* are normal in their general position and relative sizes. The four centrals form a quadrangle whose anterior side is much the shortest, the other three sides not differing much.

The *legs* are long, slender, 1, 2, 4, 3. They are of a brownish-yellow colour, spotted longitudinally on the fore sides of the femora of the first and second pairs with dark grey. The spiny armature has been somewhat injured, but there appears to have been three pairs of spines beneath each of the tibiæ and metatarsi of the first and second pairs of legs.

The *palpi* are short, slender, and similar in colour to the legs. The radial and cubital joints are very short and furnished with bristles; the former has its outer extremity slightly and obtusely produced. The digital joint is small but equal to the radial and cubital joints together in length; the palpal organs are simple, and have a tapering black spine curved round their extremity, and another on their inner side.

The *falces* project forwards; they are moderate in length and strength, yellow-brown; the sides and extremities white.

The *maxillæ*, *labium*, and *sternum* are yellow.

The *abdomen* is oblong, very slightly produced in a somewhat segmented caudate form behind; it is of a dull brownish hue suffused on the sides with whitish, and with a longitudinal whitish central band not well defined; the upperside is covered thinly with minute red-brown tubercles, from each of which at one time no doubt there issued a long spine-like bristle, but these have almost all been broken off. The underside is of a dull brownish hue tinged with yellowish, and marked off from the sides by a longitudinal blackish stripe.

The *adult female* differs from the male only in being a little larger and of a somewhat more generally yellow-brown hue. The legs are, however, shorter. The genital aperture is small and simple, but characteristic.

*Hab.* GUATEMALA, Chiacam (*Sarg*, ♂); PANAMA, Bugaba (*Champion*, ♀).

## **Tmarus pauper,** sp. n.

*Adult male*, length 2 lines.

The *cephalothorax* is of the ordinary form. The height of the clypeus is equal to half that of the facial space. The colour is dark yellow-brown, marked with converging yellowish lines, of which those indicating the caput (which run backwards a little way from each hind lateral eye), and another running from the

middle of the ocular area until it meets the two before mentioned at the thoracic junction, are the brightest and best defined. The sides of the thorax are also somewhat marbled or reticulated with yellowish.

The *eyes* are normal in general position and relative size. The four centrals form a quadrangle, whose anterior side is the shortest and the posterior side slightly the longest; and the interval between those of the fore central pair is distinctly less than that between each and the fore lateral eye next to it.

The *legs* are long and slender, 1, 2, 4, 3. They are of a yellow-brownish hue, with a rather broad dark brown longitudinal stripe along the front of the femora of the first pair; these femora, as well as those of the second pair, being also marked with white along their inner sides. The legs of the two hinder pairs are paler than the rest, and, except for some traces of white, unicolorous. The spines beneath the tibiæ and metatarsi of the first two pairs appear to consist of two pairs on the former and three pairs on the latter.

The *palpi* are similar in colour to the legs, very short, the cubital and radial joints especially; these two joints are about equal in length, the radial being the strongest, and having its outer extremity produced into a short obtusely pointed apophysis, and a strongish projection at its extremity beneath; the form of this last is not easy to make out exactly. The digital joint is of moderate size, and equal to the radial and cubital joints in length. The palpal organs are well developed, simple, encircled by a slender black filiform spine, and at their base a prominent strongish **T**-shaped process.

The *falces* are deep yellow-brown, slightly marked in front with yellowish. They are of a subconical form, moderate in length and strength.

The *maxillæ* are brownish-yellow, the *labium* and *sternum* dark yellow-brown. The sternum is of an oval shape.

The *abdomen* is oblong, somewhat subtriangularly produced at its posterior extremity. It is of a yellow-brown colour, with a narrow longitudinal central, somewhat irregularly margined, cream-white band spotted with a darker hue on the upperside, leaving a darkish yellow-brown stripe on each side of it. The sides are longitudinally striated, the striæ marked with cream-white lines; on each side of the hinder extremity a little way from the spinners are some black markings forming a kind of short curved stripe. (If this spider ever had any spiny or bristly armature on the cephalothorax or abdomen it has been broken off, but there are traces of minute tubercles from which these may have sprung.)

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is nearly allied to *T. intentus*, but may be readily distinguished by the absence of a well-defined cream-white longitudinal band bisecting the hinder slope of the thorax, as well as by the structure of the palpi and palpal organs, and other characters.

## **Tmarus studiosus,** sp. n.

*Adult male*, length 2 lines; *adult female*, $2\frac{3}{4}$ to 3 lines.

The *cephalothorax* is of the ordinary form; it is of a yellow colour, rather darker and tinged with orange on the sides of the caput and thorax, and has a few prominent black bristles on its upperside. The height of the clypeus exceeds half that of the facial space.

The *eyes* are normal in their general position and relative size. The tubercles on which they are seated are greyish-white and perhaps rather stronger than usual. The four centrals form nearly a square whose anterior side is the shortest. Those of the front row are separated from each other by equal intervals.

The *legs* are long, slender, 1, 2, 4, 3. Their colour is yellow, rather paler than the cephalothorax. The spines beneath the tibiæ and metatarsi of the first and second pairs are irregularly disposed, not in the usual pairs; beneath all the metatarsi and tarsi are some prominent pale slender spines somewhat regularly disposed.

The *palpi* are short, similar to the legs in colour. The radial is equal to the cubital joint in length, but is stronger; it has its extremity on the outer side produced into a strong pointed apophysis equal to the joint in length, and with a long nearly straight tapering black spine-like process issuing from beneath its

extremity and lying in close proximity to the underside towards the base of the digital joint. This process gives a bifid appearance to the radial apophysis. There is also a strong slightly curved process at the extremity beneath the radial joint, rather enlarged at its end. The digital joint is of moderate size, and exceeds in length the radial and cubital joints together. The palpal organs are surrounded by a black tapering sharp-pointed spine, at the base of which is a large curved somewhat irregular process.

The *falces* are moderate in length and strength, subconical, and similar in colour to the cephalothorax.

The *maxillæ*, *labium*, and *sternum* (which last is oval) are similar in colour to the legs.

The *abdomen* is of a somewhat cylindrical oblong form, pointed behind, this portion being of a quasi-segmentate structure. It is of a dull luteous-yellowish hue, marked on the upperside with two parallel slender white lines along the middle of the fore part, followed by a series of more or less distinct slightly angular lines or chevrons of a similar kind. The sides of the abdomen are closely mottled with white, and the upperside is furnished thinly with long spine-like bristles issuing from minute red-brown tubercles.

The *female* resembles the male in colours and markings, the abdomen being perhaps more suffused with white. The legs are shorter, and beneath the metatarsi of the first and second pairs the spines are more regularly arranged in pairs. In one or two specimens (which may perhaps prove eventually to be of a distinct species) the sides of the thorax have traces of white veinings and mottlings, and the anterior sides of the femora of the legs are also similarly mottled. The genital aperture is of moderate size and very characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Tmarus decens,** sp. n.

*Adult female*, length $3\frac{1}{3}$ lines.

The *cephalothorax* has the thoracic region more gibbous than usual; and the clypeus, which equals or very slightly exceeds in height half that of the facial space, is very prominent. It is of a dark dull yellowish-brown colour, almost entirely covered with cream-white mottlings, converging lines, and markings, which, however, do not overrun the hinder slope.

The *eyes* are normal in general position and relative size, though the two transverse curved lines formed by them are nearer together than usual. The four centrals form a quadrangle whose posterior side is longer than the other three sides.

The legs are moderate in length and strength, 1, 2, 4, 3. They are dull yellowish, much marked with white and spotted with yellow-brownish, and the under or anterior sides of the femora and genua of the first and second pairs are dark brown; beneath the tibiæ of the first and second pairs are four, and beneath the metatarsi five, pairs of rather short spines very regularly arranged.

The *falces* are moderate in size, subconical, and similar in colouring and mottling to the cephalothorax.

The *maxillæ* are yellowish mottled with white.

The *labium* and *sternum* are dark brown.

The *abdomen* is of an elongate subpentagonal form, with the sides towards the hinder part roundly protuberant; apparently it has a somewhat coriaceous epidermis. Its colour is dull cream-whitish tinged with brownish, marked, lined, and spotted with black above, the most conspicuous black marks being one on each side near the protuberant part, and another on each side near the spinners. The sides are strongly rugulose. The underside has a broad longitudinal dull blackish band along the middle, with a whitish stripe edged with a deep red-brown irregular line of spots. The genital aperture is obscure, but of characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## SATRICUM, gen. nov.

Nearly allied to *Drassus*.

*Cephalothorax*: *male*, length and breadth equal; *female*, breadth not much more than two-thirds of the length; oblong-oval in the latter, broad-oval in the former; lateral marginal constrictions at the caput moderate, nearly squarely truncated at the caput. The profile slopes a little downwards in a very slight convex curve from the hinder slope to the anterior eyes, with a slight depression at the thoracic junction; hinder slope abrupt. Height of the clypeus less than half that of the facial space.

*Eyes* small, almost equal in size; in two transverse rows, the anterior row straight, the posterior row slightly curved, the convexity of the curve directed backwards; rather near together. The eyes of the hind central pair are much nearer together than each is to the hind lateral eye on its side, and with the fore central pair they form very nearly a square, whose posterior side is slightly longer than the others—at any rate in the female. The eyes of each lateral pair are near together but not contiguous to each other.

*Legs* strong, moderately long, 4, 1, 2, 3, but little difference between 4 and 1, furnished with hairs and spines; a scopula beneath the tarsi and metatarsi of the first two pairs, but only beneath the tarsi of the third and fourth pairs. A claw-tuft beneath the two terminal tarsal claws.

*Maxillæ* long, strong, straight, broadest and rounded at the extremities on the outer side, somewhat obliquely truncated on the inner side, especially in the male.

*Labium* oblong, truncated at the apex, and about two-thirds as long as the maxillæ, rather shorter in proportion in the male.

*Sternum* oblong-oval, slightly pointed behind.

*Spinners* short, compact, the four outer ones of very nearly the same length.

### Satricum gnaphosoides, sp. n.

*Adult male*, length $7\frac{1}{2}$ lines; *female*, length $9\frac{1}{2}$ lines.

*Cephalothorax* yellow-brown, of a rather deeper hue on the caput, clothed pretty thickly with pale grey fine hairs. The *eyes* of the hind central pair are separated by as nearly as possible a diameter's interval, and each is about two diameters distant from the hind lateral eye on its side.

The *legs* are similar to the cephalothorax in colour. The spines are tolerably strong, and are disposed chiefly on the tibiæ and metatarsi; five pairs beneath the tibiæ and two pairs beneath the metatarsi of the first pair of legs, but only four pairs beneath the tibiæ and two beneath the metatarsi of the second pair.

The *falces* are strong, straight, rather roundly prominent in front, of a deeper hue than the cephalothorax, and furnished with numerous hairs and bristles.

The *labium* and *maxillæ* are a little paler than the falces; and the *sternum* is similar in colour to the legs.

The *abdomen* is oval, densely clothed with hairs and greyish pubescence, and of a yellowish-brown hue. The genital aperture of the female is conspicuous, of characteristic form, somewhat subtriangular, and of a deep reddish-brown colour.

The sexes do not differ much in colour. The armature of the legs of the only male specimen obtained is defective; but it appears to be a little different from that of the female, as I can only trace four pairs of spines beneath the metatarsi of the first pair of legs, similar in fact to those of the second pair.

The *palpi* of the male are moderately long, similar to the legs in colour; the radial and cubital joints are furnished thickly with long, coarse hairs, and are nearly equal in length, the latter rather the shortest and strongest, with a single black slender spine on the inner side near the base; the humeral joint has near its extremity on the upperside three strongish black spines in a transverse row, and a single one behind them; the radial joint has a small, tapering, sharp-pointed, rather prominent apophysis at its extremity on the outer side, the blackish point a little bent inwards. The digital joint is large, oval. The palpal organs are highly developed, prominent, with, among others, a small hooked corneous process at the middle of the most prominent part.

*Hab.* GUATEMALA, Tactic (*Sarg*).

Mr. Sarg speaks of these as "ground spiders."

## ARACHOSIA, Cambridge.

### **Arachosia puta,** sp. n.

*Adult female*, length 5 lines.

*Cephalothorax* considerably longer than broad; lateral margins at the caput moderately constricted, and the anterior margin squarely truncated. It is of a yellow colour, with regular, rather tapering, converging, dull reddish-yellow lateral stripes on the thorax, and from each of the hind central eyes a slender dark red-brown line runs backwards, the two meeting in a fine point just above the posterior margin of the thorax; there is also a similar but rather broken line running round a little way above the margins of the thorax. The height of the clypeus is rather more than equal to the diameter of one of the anterior rows of eyes.

The *eyes* are small and almost of equal size, seated on black spots, in two transverse rows, the anterior row shortest and nearly straight, the posterior row strongly curved, the convexity of the curve directed backwards. The interval between the eyes of the fore central pair is equal to about a diameter, each being almost contiguous to the fore lateral eye on its side. The interval between the eyes of each lateral pair is about two diameters, and those of the hind central pair are considerably further from each other than each is from the hind lateral eye on its side.

The *legs* are moderate in length and strength, and do not differ very greatly in length, 4, 3, 1, 2. They are of a yellow colour, furnished with long spines (these are so much injured that it is not possible to ascertain their disposition and numbers accurately). There is a thin scopula beneath the tarsi and a portion of the metatarsi, and a claw-tuft beneath the two terminal tarsal claws. At the hinder extremity of the tibiæ and metatarsi of the first two pairs are two or three small red-brown elongate spots.

*Falces* moderately long, straight, vertical, and like the cephalothorax in colour.

*Maxillæ* moderately long, straight, sides parallel, rounded at the extremities, similar to the falces in colour.

*Labium* short, somewhat oval, yellow, with a dusky curved marking on it.

*Sternum* rather narrow, oval, yellow.

*Abdomen* oval, cream-white, with a short red-brown dash at the middle of the fore margin of the upperside and two other similar dashes in a transverse line at the middle, also a few minute spots of red-brown on the lateral margins. The genital aperture is of a very characteristic form, and rather more than halfway between it and the spinners is a transverse slit, no doubt leading to a tracheal or breathing-organ.

*Hab.* PANAMA, Volcan de Chiriqui (*Champion*).

## CTENUS, Walckenaer.

### **Ctenus mordicus,** sp. n.

*Adult male*, length 9 lines; *adult female*, length 12 lines.

*Cephalothorax* of male longer than broad and of normal form; the lateral marginal constrictions at the caput tolerably strong; the anterior margin of the caput squarely truncated; yellow-brown in colour, covered with greyish pubescence; a broad central longitudinal band slightly darker than the rest, and margined with a deeper reddish-brown broken stripe, reaches from the eyes to the hinder margin; the sides also have a dusky broadish marginal border. The clypeus is low, and its middle portion, including also the four central eyes, is red-brown, and a stripe of the same hue runs obliquely downwards from each lateral pair of eyes to the corner of the lower anterior margin of the caput. The space between the four central eyes is clothed with coarse yellowish-grey hairs.

The *eyes* are in the ordinary position; four form a central quadrangle, whose posterior side, formed by the largest eyes of the eight, is the longest, the interval between these two eyes being no more than half a diameter; the fore central pair are not more than half the size of the hind centrals, from which, and the lower margin of the clypeus, they are separated by a very narrow but about equal interval. The hind lateral eyes are large, but not so large as the hind centrals, seated on strong tubercles and directed out-

wards; the fore laterals are very small, close, but not contiguous to the fore centrals, being separated from them by a diameter's interval only.

The *legs* are long, strong, 1, 2, 4, 3; the difference between 1 and 2 small. They are of a yellow-brown colour, clothed with coarse yellowish-grey hairs, and armed with strong black spines. Beneath the tarsi and metatarsi of the first and second pairs, and the tarsi and a portion of the metatarsi of the third and fourth, is a rather dense scopula, and a strong compact claw-tuft beneath the two terminal tarsal claws. On the outer side of the femora of the first pair are two large oblique patches of a darker hue than the rest, and the fine pubescence on the metatarsi of all the legs gives them a somewhat spotted appearance.

The *palpi* are paler in colour than the legs, clothed with hairs, and moderate in length; the radial joint is stronger than, and double the length of, the cubital, with a small pointed projection underneath close to its anterior extremity; on the upperside of the radial joint near the hinder extremity are three long tapering black bristles in a transverse line, one in a similar position on the cubital, and four near the anterior end of the humeral joint, with a single one behind them. The digital joint is of a narrow oval form, rather shorter than the radial. The palpal organs are confined to a circular space at the basal half of the joint, and are neither very highly developed nor conspicuous.

The *falces* are powerful, straight, vertical, reddish-yellow-brown, clothed in front with coarse yellowish-grey and dark hairs, and the basal portion striped longitudinally with deeper red-brown; perhaps the striped appearance is caused by the disposition of the hairs and pubescence?

The *maxillæ* are strong, straight, about double as long as broad, broader at the extremities than at the base, rounded on their outer extremity, rather obliquely truncated on the inner extremity; yellow-brown, darker at the extremities, and clothed with prominent coarse hairs.

The *labium* is about half the length of the maxillæ, longer than broad, truncate at the apex, the corners of which are, however, rounded off; its colour is dark yellow-brown, paler at the apex.

The *sternum* is oval, clothed with coarse dark hairs of a dark yellow-brown colour, rather paler in the middle.

The *abdomen* is oval, pale yellow-brown, clothed with pubescence and coarse bristly yellowish-grey hairs; along the middle of the whole length of the upperside is a broad dark brown slightly tapering band, rather dentated on the margins of the hinder part, and with a clear yellowish central stripe along the fore part for about a quarter of its length; this stripe is obtusely pointed behind and has a subprominent obtuse point on each side near the middle. Nearly the whole of the underside is occupied by a broad, tapering, longitudinal dark black-brown band reaching from end to end. The spinners are short, compact, the four outer ones nearly equal in length.

The *female* resembles the male pretty nearly in general colours and appearance, but the legs are much shorter and stronger; the femora of all the legs are marked in front with oblique dark yellow-brown bars, giving them a somewhat annulose appearance, but there is no white mottling with pubescence on the metatarsi as in the male. The cephalothorax also is of a uniform yellow-brown hue, and the markings on the upperside of the abdomen are less distinct. The spinners pale yellow.

*Hab.* GUATEMALA, Salinas de Nueve Cerros (*Sarg*).

## PRUSIAS, gen. nov.

Nearly allied to *Sparassus*, Walck.

*Cephalothorax* longer than broad, well rounded behind, and narrowing to the caput, with a strong lateral marginal indentation on each side at the junction of the caput and thoracic segments. The profile from the anterior row of eyes to the hinder slope forms an easy continuous curve. Clypeus almost obsolete.

*Eyes* in two transverse, curved, nearly equal rows (the front row rather the longest), occupying almost the whole width of the caput, the convexity of the curves directed forwards, and that of the anterior row the strongest; they are subequal in size, those of the fore central pair the largest.

*Legs* long, slender, 2, 1, 4, 3, armed with very long slender spines and long bristly hairs on the tibiæ and

metatarsi, with a thin scopula beneath the tarsi and the anterior half of the metatarsi, and a compact claw-tuft beneath the two terminal pectinated claws.

*Maxillæ* of moderate length, rounded and broadest at their extremities, somewhat inclined towards each other over the *labium*, which is very short, transverse oblong, and a little narrower at the apex, the latter rounded.

*Sternum* heart-shaped.

*Falces* moderate in length and strength, a little divergent, prominent towards their base in front.

### **Prusias nugalis,** sp. n.

*Immature male*, length $4\frac{1}{2}$ lines.

The whole spider is of a yellow colour; the cephalothorax perhaps rather darker than the rest, and clothed with pale hairs. The cephalothorax has a largish suffused blackish spot at the thoracic indentation, and the caput also has some slight dusky blackish markings.

The *eyes* are on slight tubercles: the four centrals form a quadrangular figure, whose anterior side is the longest, and the other three sides equal. The fore central pair are separated from each other by slightly more than an eye's diameter, and from the laterals by a very narrow interval, being almost contiguous; they almost reach the anterior margin of the caput, leaving little or no clypeus.

The *legs* and *palpi* are marked with small blackish spots and points, as also are the falces on their prominent portion.

The *abdomen* is oval, yellow, thinly furnished with hairs. The upperside is marked with small black spots; a diffused, rather broad, somewhat reddish-brown band runs along each side of the median line, leaving a broad central longitudinal yellow band slightly spotted with black, the latter with a large, well-defined, angular prominent point on each side towards its fore extremity, thus forming a kind of cruciform marking; the hinder part of this marking is formed by the coalition of the series of normal angular bars, diminishing in width as they run backwards. Spinners small and inconspicuous.

*Hab.* Panama, Bugaba (*Champion*).

## RAMNES, gen. nov.

Nearly allied to *Prusias*.

*Cephalothorax* a little broader than long; profile of caput slightly convexly curved from the anterior eyes to the thoracic junction; lateral marginal indentations at the caput strong. Clypeus almost obsolete.

*Legs* long, rather slender, 2, 1, 4, 3, furnished with long spines on the tibiæ and metatarsi, and a tolerably strong scopula beneath the metatarsi and tarsi, with a compact claw-tuft beneath the terminal pectinated tarsal claws.

*Falces* moderately long, strong, straight, and a little prominent towards their base in front.

*Eyes* occupying the whole width of the caput, in two transverse curved rows; the convexity of the curves directed forwards, and the anterior row slightly the longest and most curved. The four centrals form a quadrangular figure very slightly longer than broad.

*Maxillæ* short, broad, very nearly straight, broader at their extremities (where they are slightly rounded) than at their base.

*Labium* very short, small, and almost semicircular in form. *Sternum* heart-shaped.

### **Ramnes semotus,** sp. n.

*Female* (? *adult*), length 5 lines.

The *cephalothorax* is pale orange-yellow, the caput marked above with distinct black lines and other less regular markings, the thorax with a few dusky black markings on the sides. The clypeus is almost obsolete, the middle anterior or fore central pair of eyes being close to the fore margin of the caput.

The *eyes* are rather small and nearly equal in size, the fore centrals rather the largest; those of the hinder row are separated by very nearly equal intervals, those of the fore central pair are rather further from each other than each is from the fore lateral eye on its side.

The *legs* and *palpi* are similar to the cephalothorax in colour, and spotted and marked with blackish-brown spots and small striæ.

The *falces* are a little deeper in colour than the legs, and are marked along the front on the basal half with a dark slightly reddish-brown stripe.

The *maxillæ*, *labium*, and *sternum* are pale yellow, without any markings.

The *abdomen* is of a short-oval form; its colour is yellow, spotted and marked with red-brown. On the anterior half of the upperside is a longitudinal central clear yellow band pointed behind, and margined with deep red-brown broken spots and markings; following this, towards the spinners, is a series of almost confluent yellowish transverse angular bars or chevrons, and from the spinners upwards to about halfway towards the point of the central yellow band is a deep red-brown irregular stripe.

*Hab.* PANAMA, Bugaba (*Champion*).

## MISUMENA, Simon.

### **Misumena particeps,** sp. n.

*Adult female*, length 4 lines.

*Cephalothorax* yellow, with a broad longitudinal dark red-brown stripe, somewhat indented on its margins, on each side. The fore part of the broad central band between the stripes is dusky, and behind this just in front of the thoracic indentation is a **V**-shaped white marking. The cephalothorax is furnished with prominent spine-like bristles issuing from minute tubercles. The height of the clypeus is slightly less than half that of the facial space.

The *eyes* are very small, the fore laterals slightly the largest; the four centrals form a square. The eyes of the anterior row are equidistant from each other. The hind centrals are nearer together than each is to the hind lateral eye on its side. The lateral eyes are seated on strongish yellowish-white tubercles.

The *legs* are moderately long and strong, 2, 1, 4, 3, yellow, a small portion of the base of the tibiæ and a larger portion at the extremity dark reddish-yellow. Beneath the tibiæ of the first and second pairs are five pairs of spines, and beneath the metatarsi are six pairs, in two longitudinal rows.

The *falces* are moderate in length and strength, straight, subconical, of a yellowish-white colour, darker at the base in front.

The *maxillæ*, *labium*, and *sternum* are yellow.

The *abdomen* is somewhat pentagonal, much the broadest behind, of a whitish hue, thinly clothed with bristly hairs issuing from very minute tubercles. Along the middle of the upperside it is suffused with blackish-brown, having a central longitudinal white line, and some pale spots and points indicate the normal transverse angular bars or chevrons, diminishing in size towards the spinners. On the underside is a long sharp-pointed black marking running forwards from the spinners for about half its length, and on each side just above the spinners are several parallel dark lines near together, followed forwards by a long ill-defined curved blackish stripe. The genital aperture is very distinct and of characteristic form.

*Hab.* GUATEMALA, Coban (*Sarg*).

## STROPHIUS, Keyserling.

### **Strophius signatus,** sp. n.

*Adult male*, length 1½ lines.

*Cephalothorax* blackish-chestnut-brown, covered with small shining black tubercles. The height of the clypeus, which projects much forwards, is rather less than half that of the facial space.

The *eyes* are in two transverse rows, occupying the whole width of the caput; the anterior row is straight, the posterior row slightly curved, the convexity of the curve directed forwards. The four central eyes form a large quadrangular figure broader than long; and each fore central eye is much nearer to the fore lateral eye on its side than each is to the other, being separated from it by little, if anything, more than a diameter's interval. The lateral eyes are seated on strongish tubercles, and are about equal in size, but larger than the rest, the fore centrals being rather the smallest.

The *legs* are rather short, not very strong, 2, 1, 4, 3, of a dark reddish-brown colour, becoming a little paler towards the extremities. The femora of the first and second pairs are covered with minute granulosities or tubercles, with a few spines on the upperside; the other joints appear to be furnished with hairs and slender bristles only. A conspicuous slender white line runs along the upperside of the genua, tibiæ, and metatarsi of the third and fourth pairs, and a less conspicuous one on those of the first and second pairs, indeed on the latter it is scarcely traceable.

The *palpi* are short, the radial and cubital joints very short, the former the shortest and granular. The radial joint has its extremity on the outer side produced into a tapering sharp-pointed apophysis, rather closely fitting up to the digital joint, and a strong prominent obtuse one at its extremity underneath. The digital joint is of tolerable size, broad-oval, pointed in front. The palpal organs are simple, and encircled by a black pointed spine.

The *falces* are of moderate length, a little tapering, rather weak, and projecting forwards, similar in colour to the legs.

The *maxillæ* are similar in colour to the cephalothorax, and nearly meet over the long, narrow, sharp-pointed, lanceolate *labium*, which with the *sternum* is of the same colour as the maxillæ.

The *abdomen* is broad-oval, somewhat truncate behind, where it is strongly transversely rugulose, having almost a segmentate appearance; it is of a deep black colour, its upper surface covered somewhat symmetrically with roundish shining black tubercles, and in the central line, about two-thirds of the distance towards the spinners, is a conspicuous somewhat diamond-shaped bright reddish-orange spot, followed by and partially connected with a small one of the same hue; on the sides near the spinners are two or three small linear spots. The underside is dark black-brown, and the spinners are small and compact.

*Hab.* GUATEMALA, Chamiquin (*Sarg*).

## STEPHANOPOIDES, Keyserling.

### **Stephanopoides cognata,** sp. n.

*Adult female*, length slightly over 3 lines.

*Cephalothorax* reddish-yellow-brown, covered with short whitish hairs, and with some faint darker markings along the middle, and a distinctly marked broad, deep red-brown band along each side. The height of the clypeus is distinctly less than half that of the facial space.

The *eyes* are normal in general position and relative size; those of the fore central pair are nearer together than each is to the fore lateral eye on its side.

The *legs* are short, strong, 1, 2, 4, 3, furnished with white and other hairs, and strong spines on the tibiæ and metatarsi; of these spines four pairs are situated beneath the tibiæ and three pairs beneath the metatarsi of the first and second pairs of legs, in a regular longitudinal series; there are also two pairs beneath the metatarsi of the third pair. The legs are of a yellow-brown hue, the anterior half of the tibiæ and two broad rings on the metatarsi of the first and second pairs being deep reddish-brown. The corresponding joints of the third and fourth pairs are somewhat similarly but less conspicuously marked.

The *palpi* are brownish-yellow, the radial and digital joints red-brown.

The *falces* are powerful, rather long, subconical, and prominent in front towards the base. Their colour is deep red-brown, covered with short whitish hairs like the cephalothorax.

The *maxillæ* and *labium* are yellow-brown, the latter the darkest.

The *sternum* is yellow, with a yellow-brown margin, marked with darker brown spots opposite the points of insertion of the legs.

The *abdomen* is of a somewhat subpentagonal form, broadest behind, subangularly prominent on each side at its broadest part. It is of a dull yellow-brown hue—probably whitish-yellow in parts, when alive; on the upperside is a large diamond-shaped area of a darker hue beginning some little distance behind the anterior extremity and running to the spinners. This area has four black spots with yellowish marginal rings forming a quadrangle, broader than long, near the middle, the two anterior spots being the largest. There are also many yellowish spots of various sizes, some of the most conspicuous of which are symmetrically disposed between, and in front of, the quadrangle. Also from this diamond-shaped area two oblique

yellowish stripes run downwards on each side. Between the genital aperture (which is of simple but characteristic form) and the spinners there is on the underside a broad brown longitudinal band, narrowest behind and margined with yellowish-white.

*Hab.* PANAMA, Bugaba (*Champion*), Veraguas (*Boucard*).

This spider is nearly allied to *S. brasiliana*, Keys., and *S. simonii*, Keys., both from Pará; but M. Simon has decided it to be distinct.

## PERISSOBLEMMA, Cambridge.

### **Perissoblemma approximatum,** sp. n.

*Immature female*, length slightly over 1 line.

In general form and appearance this spider closely resembles *P. thomisiforme*, Cambr., from the Amazons (P. Z. S. 1881, p. 774, t. 66. fig. 6); it differs, however, in its colours and in the position of the lateral eyes of the anterior row and their relative size.

The *cephalothorax*, *falces*, *maxillæ*, *labium*, and *sternum* are dark yellowish-brown.

The *legs* are moderately long and strong, armed with spines beneath the tibiæ and metatarsi, yellow, with a slightly olive-green tinge. They are nearly equal in length, those of the third pair a little the shortest.

The *abdomen* is dull sooty-brown, paler underneath, and clothed with short hairs.

The *eyes* of the fore-central pair are much larger than the laterals on each side of them, and these last, instead of being almost in the same curved line as the two on each side of the posterior row, are placed much more in front of them—the four anterior eyes forming, in fact, a straight line, whereas in *P. thomisiforme* the line is curved. The height of the clypeus rather exceeds the diameter of one of the fore-central eyes.

*Hab.* PANAMA, Bugaba (*Champion*).

## DELOZEUGMA, gen. nov. (Drassidæ).

*Cephalothorax* oval, rounded behind, moderately constricted laterally forwards, truncated in front; moderately convex above, caput fairly rounded and scarcely higher than the thorax, a slight dip only, when looked at in profile, between the caput and thorax; thoracic indentation longitudinal, deep, but narrow; hinder slope gradual; clypeus low. The middle of the ocular area a little projecting forwards.

*Eyes*, looked at from above and behind, in two transverse curved rows, the curves of which are directed away from each other. They are of moderate size, subequal; those of the fore-central pair are considerably the largest, and their visual axis is directed straight forwards. The four centrals form a square; those of each lateral pair are placed slightly obliquely on a very small tubercle, and the eyes of each are nearly, but not quite, contiguous to each other.

*Legs* rather long, moderately strong, armed with spines (at least those of the third and fourth pairs, for the others are absent, owing to damage before the specimen was received; their relative length, therefore, cannot be ascertained). The tarsal claws appear to be two, with a small but compact thick claw-tuft and a thin scopula beneath the tarsi.

*Falces* long, powerful, cylindrical, divergent, projecting forwards and rather downwards. Fang of great length and strength, as long as the falx; articulated horizontally, with a vertical movement, and, when at rest, lying straight backwards longitudinally along the middle of the underside of the falx, as in the Theraphosidæ.

*Maxillæ* moderate in length and strength; rounded at the extremity on the outer, and obliquely truncated on the inner side, a little inclined towards the labium.

*Labium* broader than long; scarcely half the length of the maxillæ, and somewhat roundly truncate at the apex, where it is not so broad as at the base, near which is a fine transverse suture.

*Sternum* oval, hollow-truncate at its anterior extremity. (The abdomen is too much shrunken to give any certain idea of its form or of the spinners, which last appear to be short and compact, with immediately

in front of them a rather conspicuous plate, whose posterior edge being free, probably covers the orifice of a spiracular organ.)

The spider on which this genus is founded is remarkable on account of the mode of articulation and movement of the fangs of the falces. This has hitherto been considered a primary differential character between the Theraphosidæ and all other spiders. We have here, therefore, a manifest transition from the Theraphosidæ to the Drassidæ, perhaps through the Dysderidæ.

### **Delozeugma formidabile,** sp. n.

*Adult male*, length 5 lines; length of the cephalothorax very nearly 3 lines; length of the falces slightly over 2 lines.

The *cephalothorax* is of a deep rich black-brown colour, tinged with reddish; its surface is thickly covered with minute granulations. The normal grooves and indentations are very slightly indicated.

The *eyes* of the hind-central pair are further from each other than each is from the hind-lateral eye on its side, and the interval between those of the fore-central pair, which are the largest of the eight, is less than a diameter, these two eyes being seated on a prominence of the ocular space with a vertical position. The height of the clypeus (which is much impressed) is not much greater than the diameter of one of the fore-central eyes.

The *legs* are yellow-brown (only those of the third and fourth pairs remain, and on these spines are present on the femora, tibiæ, and metatarsi).

The *palpi* are moderately long, yellow-brown, the digital joint dark brown. The cubital joint is slightly clavate; the radial joint is longer than the cubital, somewhat produced in front at the anterior extremity, and on the outer side is a moderately long apophysis of a somewhat flattened or flap-like form, truncated at its extremity; beneath the humeral joint on its posterior half are five or six erect bristles in a longitudinal line, and three fine short spines on the fore part of the upperside.

*Falces* long, prominent, subcylindrical, straight, with two long strong sharp teeth beneath rather towards the outer side; the longest of these teeth is in the middle and directed obliquely forwards, the other is towards the base near the extremity of the maxillæ, and vertical. The fangs are as long as the falces, and very slightly curved; beneath each a little way forwards from its insertion is a strong nearly vertical tooth. The fangs when at rest lie along the underside of the falces close up to the two long teeth above noted. The falces are similar to the cephalothorax in colour, and also in being covered along the upperside with minute granulations; the sides being glossy and smooth.

The *maxillæ*, *labium*, and *sternum* are dark yellow-brown.

The *abdomen*, which is much shrunken, appears to be oblong-oval in form, of a yellow-brown colour, palest along the upperside, and furnished with short hairs.

*Hab.* Mexico, Guanajuato (*Alfred Dugès*).

The description is taken from a dry and much injured specimen kindly communicated to me by Prof. Alphonse Herrera, of the National Mexican Museum.

## MACROPHYES, gen. nov. (Drassidæ).

*Cephalothorax* short, oval, but longer than broad, somewhat flattened above, truncate before; profile line level to the eyes, with the slightest possible impression at the junction of the caput and thorax.

*Eyes* small, tolerably closely grouped, and not greatly different in relative size, except the fore-centrals, which are much the smallest, in two transverse rows, very slightly curved away from each other; the anterior row shortest. Ocular area slightly prominent, and sloping a very little forwards, the clypeus low.

*Legs* 1, 4, 2, 3, very long, slender, furnished thinly with fine hairs, and armed with long slender spines, those beneath the tibiæ of the first and second pairs arranged in a series of pairs. The tarsi end with two curved pectinated claws, beneath which is a small scopula.

*Palpi* long, slender; armed like the legs.
*Falces* long, divergent, and projecting.
*Maxillæ* long, rather divergent, broad at the extremity, which is rounded on the outer, and cut away on the inner side.
*Labium* about half the length of the maxillæ, the lateral margins slightly curved; the apex truncated, but slightly depressed or hollow in the middle.
*Sternum* oval.
*Abdomen* very long, narrow, cylindrical but slightly tapering to the spinners, the superior pair of which are much longer than the inferior, and two-jointed.

This genus is nearly allied both to *Clubiona* and *Chiracanthium*.

### **Macrophyes attenuata,** sp. n.

*Adult male*, length 4 lines; length of cephalothorax 1 line, length of abdomen 3 lines.
The *cephalothorax*, falces, and maxillæ are yellow, the legs, palpi, and sternum rather paler, and the abdomen is of a pale luteous-yellow.
The radial joint of the palpus is slightly curved, very long, and almost equal in length to the humeral joint, and has a small rather tapering blunt-pointed apophysis at its extremity on the outer side; the digital joint is also long and narrow, furnished with coarse hairs, and with a large lobe on the outer side. The palpal organs are well developed, prominent, not very complex, consisting of a large oval lobe, encircled with a long, slender, closely-fitting, sinuous spine; a short sharp-pointed dark spine, and a bent, obtusely-pointed corneous process are near together at their extremity.
The *eyes* are seated on black tubercles and are all of a pearly lustre, excepting the fore-central pair, which are dark, and much the smallest of the eight; the other six are nearly of uniform size, the fore-laterals being the most prominent; the hind-centrals are oval and separated from each other by rather a wider interval than that between each and the hind-lateral eye next to it.
The *falces* are furnished with numerous coarse bristly hairs on the inner side towards their extremity, some of them being of a spinous nature, strongly and regularly bent, and forming a longitudinal row on the upperside of the rest; beneath these hairs is a row of five or six minute teeth; and there is a single strong prominent sharp tooth on the underside near the articulation of the fang.
The *maxillæ* are furnished with numerous prominent coarse hairs near their extremity on the inner side.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## HERSILIA, Savigny.

### **Hersilia mexicana,** sp. n.

*Adult female*, length $3\frac{1}{2}$ lines; *adult male*, length $2\frac{1}{2}$ lines.
In general form and appearance this spider nearly resembles the type species (*H. caudata* ,Aud.: in Sav. 'Egypte,' t. 1. fig. 8).
The *cephalothorax* of the female is of a dark yellowish-brown colour, with a lateral longitudinal band of whitish hairs on each side some little way above the margin, and a short longitudinal more or less distinct yellow line divides the upperside of the caput. The very small caput is prominent, or rather the normal indentations showing the junction with the thorax are large and deep. The clypeus projects considerably at its lower margin, and its height is more than half that of the facial space.
The *eyes* are of moderate size, subequal, placed in two curved rows (whose convex sides are directed forwards) on the front or face of the caput, the lower row being much the most strongly curved. The four central eyes form a quadrangle whose opposite sides are equal, but its length is greater than its breadth, and the lower pair of eyes are a trifle larger than the others. The eyes of the posterior (or upper) row are equally divided from each other; and the lateral eye (on each side) of the anterior (or lower) row is halfway between the hind-lateral and fore-central eyes, though rather outside of their direct line, and appears to be the smallest of the eight.
The *legs* are very long, slender, 1, 2, 4, 3, those of the third pair being very much the shortest. They are

pale yellow, broadly and distinctly banded with black-brown, furnished with fine hairs and a few short fine spines. The tarsal claws (3 in number) spring from a very small false terminal joint.

The *palpi* are similar to the legs in colour, but the dark annuli are smaller.

The *falces* are moderately long, not very strong, straight, and a little inclined to the maxillæ. Their colour is similar to that of the cephalothorax.

The *maxillæ* are short, rounded at the extremities, and much inclined over the *labium*, which has an impressed transverse line or groove across the middle, and its apex somewhat bluntly subangular. The colour of these parts is yellowish-brown.

The *sternum* is heart-shaped, broadly and very hollow, truncated at its anterior extremity; its colour is pale yellow.

The *abdomen* is of a short, broad-oval form, widest behind, where it is well rounded; the upperside is moderately convex. It is of a dull luteous-brown ground-colour on the upperside and sides, considerably and closely marked with black, the principal pattern being a longitudinal central somewhat dentate stripe, with a bifid area on the fore half, followed to the spinners by a series of transverse, more or less perfect, angular bars. A broken transverse, yellow-white, rather irregular band crosses the abdomen a little in advance of the middle, and in front of this are two short longitudinal curved bars of the same colour, one on each side. The underside is pale dull whitish, with a bordering of white cretaceous spots. The spinners of the superior pair are as long as the abdomen, and taper to a point; their colour is yellowish, annulated with blackish-brown. The genital aperture is small but of characteristic form.

The *adult male* resembles the female in general characters, colours, and markings, but the legs, palpi, and superior spinners are less distinctly annulated; the latter being also somewhat longer in proportion.

The *palpi* are rather long. The radial joint is nearly double the length of the cubital, a little incrassated towards its extremity, but with no projection or apophysis. The digital joint is as long as the radial, and drawn out into a finger-like point at its fore extremity, ending with several short curved spine-like bristles. The palpal organs are prominent, globular, rather simple, extending to only half the length of the digital joint.

*Hab.* MEXICO, between Amula and Chilapa, at an elevation of 6000 feet (*H. H. Smith*).

## EURYOPIS, Menge.

### **Euryopis lineatipes,** sp. n.

*Adult female*, length very nearly 2 lines.

*Cephalothorax* dark brown. The profile forms a continuous and steep slope from the eyes to the posterior margin, which is considerably excavated; the clypeus is impressed beneath the eyes, but prominent below, and its height considerably exceeds half that of the facial space; ocular area rather prominent.

The *eyes* are moderately large, and not very greatly different in relative size. The four centrals form a large quadrangle whose anterior side is the longest and the posterior the shortest. The fore-central pair are largest, and are separated by an interval of a diameter and a half from each other, and from the laterals by less than half a diameter. Those of each lateral pair are very close together, but not quite contiguous. The hind-centrals are separated from each other by about a diameter, but by a diameter and a half from the laterals. The posterior row is very nearly straight, the anterior row strongly curved, the convexity of the curve directed forwards.

The *legs* are short, subequal, 4, 1, 2, 3; the femora, metatarsi, and tarsi pale yellow, the femora conspicuously marked with short, black, transverse lines, markings, and spots; the metatarsi have a longitudinal black stripe along the side, with short transverse black marks on the outer side, on the third and fourth pairs the longitudinal stripe is on the posterior side, and the transverse marks on the inner side. The coxal, genual, and tibial joints are all dark yellowish-brown, irregularly suffused with blackish. All the legs are thickly furnished with coarse bristles, some, especially on the tibiæ, being almost spines; indeed, one or two on their uppersides are quite so.

*Palpi* short, strong; pale yellow, with transverse black lines and markings.

*Falces* moderately long, vertical, not very strong, yellow-brown, suffused with blackish on the anterior half.

*Maxillæ* rather strong, somewhat pointed, and almost meeting over the *labium*, which is of a quadrangular form, pointed at the apex. These parts are yellowish-brown, suffused with blackish.

*Sternum* short, broad heart-shaped, indented in front, similar in colour to the labium.

*Abdomen* rather large, heart-shaped (indented in front), or somewhat triangular with the anterior corners rounded off. It projects considerably over the base of the cephalothorax. The upperside is of a shining silvery-white, the fore margin and sides dull black; at the anterior part of the silvery upperside is a large subtriangular dull black marking, its apex sharp and directed backwards, its sides somewhat crenated, and its base (in front) much curved—this marking, in fact, is very nearly of a similar shape to that of the abdomen. The upperside and sides of the abdomen are furnished thinly with coarse prominent dark bristles. The underside is dull yellowish-brown, mottled with small silvery markings and black fine striæ, except a large central portion, from the fore part to the spinners, which is black-brown, with a small silvery patch just behind the genital aperture, and two other larger ones, one on each side a little way from the spinners. The genital aperture is of a red-brown hue and nearly circular. The spinners are small, short, prominent; they are of yellow-brown colour; the inferior pair largest.

*Hab.* GUATEMALA (*Sarg*).

This exceedingly pretty spider is nearly allied to *Euryopis funebris*, Hentz, sub *Theridion* (also figured and described by Keyserling in 'Spinnen Amerikas: Theridiidæ,' ii. Hälfte, zweiter Bd., p. 49, t. 12. fig. 161), and to *E. taczanowzkii*, Keys. (*op. cit.* p. 47, t. 12. fig. 160); but may easily be distinguished by the different pattern on the abdomen, and the strikingly different markings on the legs. The genital aperture also is of a different form.

## EPISINUS, Walckenaer.

### **Episinus cognatus**, sp. n.

*Adult male*, length 2 lines.

The *cephalothorax*, legs, palpi, maxillæ, labium, and sternum are of a dull yellow hue. The cephalothorax is clothed thinly with coarse greyish hairs, and is deeply indented longitudinally at the thoracic junction. It is marked with a central longitudinal black line, bifid at its anterior extremity behind the eyes, and has also some broken blackish markings on the sides of the thorax. The ocular region is a little raised; and the clypeus is prominent, its height appearing to be about half that of the facial space.

The *eyes* are of moderate size, and placed on tubercles in the normal position; the interval between the hind-central pair is greater than that between each and the hind-lateral eye next to it.

The *legs* are very long, 1, 4, 2, 3, slender; furnished pretty thickly with coarse hairs, and with a few bristle-like spines on their tibial and genual joints; their colour is dull yellow, with the anterior portion of the tibiæ slightly suffused with yellow-brown.

The *palpi* are long, slender, and furnished with coarse bristly hairs; the humeral, cubital, and radial joints are somewhat clavate, or gradually incrassated at the fore extremities; the radial is a little shorter than the cubital joint, the former somewhat pointed at its fore extremity above. The digital joint is of a rather narrow or oblong-oval form; and the palpal organs are tolerably compact, but complex, with various spiny processes.

The *falces* are moderately long, not very powerful, and project forwards.

The *maxillæ* are of tolerable length, somewhat bent and inclined towards the labium, and slightly obliquely truncated at their extremity.

The *labium* is short, less than half the length of the maxillæ, and truncated at its apex.

The *sternum* is heart-shaped, dull yellowish slightly suffused with brown.

The *abdomen* is oval, truncate before, slightly subangularly prominent on each side towards the hinder part; and its posterior extremity is rather drawn out into a somewhat subcaudal form, showing plainly on the upperside by its transverse lines the pristine segmentation of that part. The abdomen is of a dull pale drab colour, marked on the upper part and sides (but not giving any very distinct pattern) with black spots and small markings, and with also a few white obscure spots; on the upperside are a few coarse

bristly hairs, and towards the hinder part two or three longer ones of a somewhat flattened or blade-shape. The spinners are short, compact, and placed at the extremity of the produced portion of the abdomen.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

This spider is nearly allied to *Episinus longipes*, Keys. (a Peruvian species), but differs in not having the legs distinctly annulated, as well as in the markings of the cephalothorax and abdomen.

## ARGIOPE, Audouin ex Savigny.

### **Argiope personata,** sp. n.

*Adult female*, length 12½ lines.

*Cephalothorax* of ordinary form; colour dull reddish-yellow; ocular area black, with a small central yellowish spot; on either side is a broad, broken, blackish, longitudinal, lateral band, not quite reaching the ocular area; from the thoracic indentation a blackish line runs forwards and meets the anterior extremity of the lateral bands, and behind the thoracic indentation the slope is also blackish. The surface of the cephalothorax is covered with short grey hairs or pubescence.

The *eyes* are small and in the usual position; those of each lateral pair are seated on a strongish tubercle, and the fore-central pair are also on a strong prominence; the four central eyes form a trapezoid whose length is about one half greater than its breadth, and its posterior side rather shorter than its anterior side. The hind-central pair are the smallest of the eight; those of each lateral pair are contiguous to each other and placed slightly obliquely.

The *legs* are moderately long, strong, 1, 4, 2, 3, of a bright reddish-yellow, or orange, broadly and distinctly banded with black, and furnished with hairs and numerous short, black, not very strong spines. The yellow portions are clothed with grey pubescence.

The *palpi* are similar in colour and armature to the legs.

The *falces* are moderate in length and strength, their colour black, with patches of orange-yellow in front.

The *maxillæ* are of normal form, yellowish, marked with black strongly but irregularly at the base and on the outer side.

The *labium* is semicircular, black, with a reddish-yellow apex.

*Sternum* oval, hollow-truncate in front, bright yellow, with a broad well-defined marginal black band.

The *abdomen* is of rather oblong-oval form, squarely truncate in front and somewhat angularly prominent on each side, or corner, of the fore extremity; the posterior extremity is conically produced into a short caudiform elongation projecting well beyond the spinners. The upperside is of a pale yellowish-brown colour, darkest at the two extremities, strongly marked with transverse and oblique white bands and stripes; these (probably) have a satiny or silvery hue in life. The three posterior bands are curviform and span the whole upperside; the next forwards is broken in the middle, and so also is the anterior one, which runs up in an angular point to the extremity of the lateral prominence on each side; between the ends of these bands are shorter lateral ones. The sides are yellowish, thickly streaked and marked with dark brown. The underside is black-brown, marked along the sides with cream-yellow somewhat connected patches; some yellow spots, in pairs, occupy the median line from the genital process to the spinners, which are short, compact, and of a deep black-brown colour. The genital process, or epigyne, is long, black, rather narrow, and extends, almost in close contact with the abdominal surface, through the middle of a brightish yellow somewhat quadrate patch.

*Hab.* MEXICO, Acapulco (*H. H. Smith*).

Mr. Smith notes that this spider "makes a very large, strong, perpendicular, geometrical web (often three feet in diameter), having four radiating, zigzag, opaque strips forming a St. Andrew's Cross, and extending only one-third of the distance to the outer edge of the web."

## EPEIRA, Walckenaer.

### **Epeira nigropustulata,** sp. n.

*Male* (immature), length $2\frac{1}{2}$ lines.

*Cephalothorax* oval, longer than broad, almost squarely truncated before; lateral constrictions at the caput moderate; height of the clypeus not much more than equal to the diameter of one of the fore-central eyes; colour brownish-yellow; ocular area rather projecting.

*Eyes* small and not greatly different in size; they are placed in the usual three groups: four form a small central quadrangle rather longer than broad; these are on the central prominence of the caput: those of each lateral pair are contiguous to each other, placed on a slight tubercle, and removed from the central group by an interval equal to the length of the line formed by its posterior side.

*Legs* rather short, moderately strong, relative length 1, 2, 4, 3, furnished with hairs and a few very fine spines; colour brownish-yellow, the tips of all the tarsi and of the tibiæ of the fourth pair of a darker yellow-brown.

*Palpi* short, yellow; digital joint and palpal bulb (the organs not yet developed) almost globular, and of moderate size.

*Falces* yellow, moderate in length and strength, prominent at their base in front.

*Maxillæ*, *labium*, and *sternum* of normal form, and of a dull yellowish dusky-brown hue.

*Abdomen* of a somewhat oblong-oval form; profile-line moderately curved; hinder slope abrupt, almost vertical. The upperside is black, with a longitudinal central white stripe, widening from the front to the middle, and contracting thence to the beginning of the hinder slope, with two or three angular prominences on each side; at the end of this stripe and in the same line with it are two round, rather conspicuous, raised, shining black bosses or pustules, near together, and on each side of these two (but not contiguous) is another similar boss, but of larger size. These four bosses are very characteristic, and each has a distinct white blotch at its hinder side; in front of each lateral boss is another conspicuous, white, elongate, transverse blotch; and along the lateral margins of the black of the upperside of the abdomen are three or four other less distinctly defined white spots or blotches merging in the rest of the white lower portion of the sides; underside dusky, with a longitudinal central white line. Spinners short, compact, and of a dull yellow colour.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

### **Epeira nigrohumeralis,** sp. n.

*Adult female*, length 2 lines.

The *cephalothorax* is of normal form; the ocular region a little produced. It is of a yellow-brown colour, the sides of the caput blackish, and the whole thickly clothed with long, fine, pale grey hairs.

The *eyes* are in the usual position and on slight tubercles; the four centrals are subequal and form a square; those of each lateral pair are contiguous to each other and placed obliquely, being removed from the four central eyes by an interval about equal to the line formed by the anterior pair. The clypeus is very low and retreating.

The *legs* are very short, 1, 2, 4, 3, tolerably strong, fairly well armed with spines (some of which are long), and clothed with grey hairs. Their colour is yellow-brown; the femora and the anterior portion of the tibiæ are more or less suffused with black.

*Palpi* yellowish.

*Falces* moderately long, rather strong, and similar to the cephalothorax in colour.

*Maxillæ* normal in form, yellow-brown, palest at the extremity.

*Labium* rather pointed at the apex, where it is of a paler brownish-yellow hue than the rest.

*Sternum* heart-shaped, yellow-brown, with one or two white markings of variable form.

*Abdomen* large, short broad-oval in form, of a dull luteous colour, obscurely spotted or mottled with whitish; a large oblique black patch, white-bordered on the inner side, occupies each side, or shoulder, of the abdomen forwards, and on the hinder part is a rather indistinct central longitudinal brownish band whose fore extremity forms an angular point; on either side of this band near the spinners are some short horizontal, parallel, linear, black spots or dashes. The underside of the abdomen has four white patches or

irregular spots (of which the two posterior are the largest and best defined), forming a large square just behind the genital process, which is small but prominent and of characteristic shape.

*Hab.* Mexico, Venta de Zopilote, at an altitude of 2800 feet (*H. H. Smith*).

This spider is of the *E. sollers*, Walck., group.

### **Epeira minax,** sp. n.

*Adult female*, length 7–9 lines.

This spider is of normal form, and is allied to *E. purpurascens*, Cambr. (*anteà*, p. 33, Tab. VII. figg. 4, 5), but is larger and differs in colours and markings.

The *cephalothorax* is of a bright reddish hue, a little suffused with brownish on the sides, and clothed pretty thickly with long, coarse, pale grey hairs.

The *eyes* are small, subequal; the four centrals are seated on a prominence and form a small quadrangle whose posterior side is the shortest and its anterior slightly the longest. The interval between those of the fore-central pair (which are the largest) is equal to rather more than two diameters; that between those of the hind-central pair is less than two diameters. Those of each lateral pair are on a tubercle at a considerable distance from the four central eyes, very small, placed obliquely and contiguous to each other. The clypeus is very retreating; its vertical height is less than half that of the facial space.

The *legs* are long, strong, 1, 2, 4, 3; the femora are of a dark black-brown colour; the genual and tibial joints are bright reddish, the latter deepening in hue at their anterior extremities, the metatarsi and tarsi being of a dull yellowish hue deepening to brown at the fore extremities. They are clothed pretty thickly with long pale grey hairs and armed with (mostly) pale spines.

The *maxillæ* and *labium* are black-brown, tipped with whitish.

The *sternum* is subtriangular, of a reddish hue, suffused in the middle with brown.

The *abdomen* is large, oval (in the only examples seen this part has shrunk a good deal, but its general form appears to be that of the common European species, *E. diadematа*, Clk.). It is of a black-brown hue, thinly covered with long, prominent, pale grey, bristly hairs. On its upperside is a large, central, somewhat dagger-shaped, yellowish-white, longitudinal marking, pointed at each extremity but sharpest behind; and on each side is a long, bold, longitudinal stripe of the same colour. In the middle of the underside is a large, black, shield-shaped area margined with dull orange-yellow. The genital process is of a boldly rugose form, and has connected with it a long, tapering, sharp-pointed strong epigyne, which, issuing from in front, bends backwards over the aperture and runs parallel with the under surface of the abdomen, reaching nearly, if not quite, to the spinners. Some considerable variety would probably be found in a series of this spider in respect to the markings on the abdomen: in one of the examples examined there is only a comparatively small, elongate, sharp-pointed, oval, longitudinal marking on the middle of the upperside, the lateral markings being represented by a few small spots.

*Hab.* Mexico, Acaguizotla in Guerrero 3500 feet (*H. H. Smith*).

## CYCLOSA, Menge.

### **Cyclosa culta,** sp. n.

*Adult male*, rather more than $1\frac{1}{2}$ lines.

The *cephalothorax* is of normal form, the caput drawn out in front at the ocular region. Its colour is bright orange-yellow, with a blackish longitudinal line at the junction of the caput and thorax, whence some diverging dusky lines, marking the obsolete segments of the thorax, run towards the margins on each side.

The *eyes* are small, subequal, and placed in the usual four pairs at the extremity of the rather produced caput. The two central pairs form a quadrangle whose greatest breadth is rather less than its length and its posterior side the shortest. The eyes of the fore-central pair are separated by an interval of nearly two diameters from each other, and seated on strongish tubercles; those of the hind-central pair are less than a diameter apart, and with those of the two lateral pairs form an almost straight transverse line. Those of each lateral pair are nearly contiguous, and seated obliquely on a small tubercle.

The *legs* are moderate in length and strength, 1, 4, 2, 3; the coxal, exinguinal, femoral, and genual joints are similar to the cephalothorax in colour; the tibiæ, metatarsi, and tarsi blackish-brown, more or less faintly annulated with yellowish. They are furnished with hairs and a few spines, the strongest and most numerous of which are on the tibiæ of the second pair.

The *falces* are moderate in strength, inclined towards the maxillæ and labium, and (with those parts) are of an orange-yellow hue.

The *sternum* is heart-shaped, orange-yellow, suffused with blackish.

The *palpi* are short, of a pale yellow colour; the digital joints brownish-yellow. The cubital and radial joints are very short; the former has on its upperside a single, not very strong, curved, tapering bristle, and the latter is much dilated at its anterior extremity. The palpal bulb is rather large, and the palpal organs are complex, with strong spiny processes.

The *abdomen* is oval, and almost as deep as it is broad, with the upper part of the hinder extremity somewhat bluntly or subangularly produced, though when looked at in profile the produced part projects very little beyond the spinners. It is of a dull yellowish colour, with a longitudinal laterally angulated band, defined by a dusky blackish marginal border along the upperside, and with obscure whitish spots in the angles of the band. The sides are marked with an irregular blackish patch and short linear spots. The spinners are surrounded by a blackish area whose margin is dentated, and from this a broad yellow-brown band runs forwards to the fore extremity, and has a black spot on each side towards the spinners.

*Hab.* MEXICO, Sierra de las Aguas Escondidas, near Omilteme, in Guerrero, at an altitude of 9500 feet (*H. H. Smith*).

It is most probable that the intensity and distinctness of the colours and pattern of the abdomen would be found to vary considerably in a series of this species.

## CYRTARACHNE, Thorell.

### Cyrtarachne dugesi, sp. n.

*Adult female*, length 7 lines; length of cephalothorax $2\frac{1}{2}$ lines; height of abdomen vertically from epigyne to highest point rather over 5 lines.

*Cephalothorax* rather longer than broad; caput large, broad in front, strongly gibbous above near the occiput; thoracic indentation large and deep. It is yellow-brown in colour, deep yellow-brown on the sides and at the thoracic indentation; clothed with short grey hairs, some of which, whiter than the rest, form a marginal line, and other white lines connect the eye-prominences and mark the junction of the caput and thorax, as well as the occipital region.

*Eyes* on three prominences, the central prominence of moderate strength, bearing the four central eyes, and a lateral prominence on each side, each bearing a lateral pair, and proportionally stronger than the central prominence. The eyes are small, and do not differ much in size. The four centrals form a small square whose anterior side is slightly shorter than the other sides. The lateral pairs are on the sides of the lateral prominences, and those of each lateral pair are very near but not quite contiguous to each other. The clypeus is very retreating, owing to the projection of the central eye-prominence, and its height is considerably less than half that of the facial space.

*Legs* short, moderately strong, 1, 4, 2, 3; 1 and 4 being very nearly equal in length. They are of a dull yellow colour, faintly annulated with yellow-brown; clothed with short greyish hairs, and armed with short, not very strong spines.

*Palpi* short, similar in colour and armature to the legs.

The *falces* are powerful, moderately long, very convex or prominent in front, of a clearer yellow-brown colour than the cephalothorax, and furnished with short grey hairs.

*Maxillæ* very short, rather broad, truncated at the extremity (which is whitish, the rest being yellow-brown), and inclined over the labium; this part is also very short. The apex is somewhat obtusely subangular. The colour of the labium is deep yellowish-brown.

The *sternum* is heart-shaped, yellowish, with yellow-brown blotches opposite the insertion of the legs, and clothed with coarse grey hairs.

The *abdomen* is very large, roughly globular, or very short convex-oblong. It projects almost completely over the cephalothorax, and is as high as it is long. Its upper surface is furnished with fourteen subconical prominences (not differing greatly in size), of which five on each side form a lateral rather curved row, meeting at the hinder part in another prominence which, being in the centre, is common to both rows; the anterior prominence on each side is duplex or bifid; between these bifid prominences is a central one well in advance of their straight line; and the fourteenth is near the hinder part, larger than the rest, and a little in front of the one common to the lateral rows. The abdomen is of a yellow-brown colour, marked with darker yellow-brown, forming a pattern which is also outlined by lines of short greyish-white hairs; this pattern consists chiefly of a broad, deeply dentated, longitudinal band on the upperside, the space included by it being probably in some examples darker than the rest. There are also a number of small, circular, deep reddish-brown spots or points scattered evenly over the surface; and the sides are marked with several indistinct oblique whitish stripes. The underside has an indistinct, longitudinal, yellow-brown band a little darker than the rest, with a narrow, transverse, yellow bar just in front of the spinners, looking like the edge of a spiracular orifice. The spinners are short, tolerably compact, and of a dark yellow-brown hue. The genital process is small, but of characteristic form, and has a small, prominent, curved or crochet-shaped, tapering epigyne issuing from it.

*Hab.* MEXICO, Guanajuato (*Alfred Dugès*).

## TURCKHEIMIA, Cambridge.

### **Turckheimia (?) armata,** sp. n.

*Adult female*, length 5 lines.

*Cephalothorax* deep blackish-brown. Caput elevated, strongly tumid or gibbous on the sides of the upper part, the constriction at the junction with the thorax very strong. The upper part of the caput is furnished with a few grey hairs, and has its surface thickly covered with impressed dots or punctures. The margins of the thorax have some granulosities. The height of the clypeus exceeds half that of the facial space.

*Eyes* small, subequal. The four centrals form a small quadrangle, nearly or quite square, on a small prominence in front of the caput, and the lateral pairs are on either side at the extreme width of the caput.

*Legs* short, moderately strong, 4, 1, 2, 3, armed with neither very long nor strong spines, and clothed with short grey hairs; their colour is deep black-brown, the tibiæ, metatarsi, and tarsi rather irregularly annulated with pale yellow.

*Falces* strong, *maxillæ* and *labium* short, *sternum* short, heart-shaped. These parts are similar in colour to the cephalothorax, the maxillæ and labium narrowly tipped with pale whitish.

The *abdomen* is large, its general form somewhat oblong. The fore extremity on the upperside is produced into two strong subconical eminences, one on each side in a transverse line; each of these is bifid at the extremity, being divided into two sharp-pointed spine-tipped finials. Two other somewhat similar single-pointed eminences are longitudinally placed on each side towards the hinder part, where there is a group of five similar eminences of different sizes, the three largest placed in a transverse line (the middle one less large than the others) and another is placed immediately in front of and behind these three—that in front of the three is the most regularly tapering, that behind them is the smallest; these five eminences (or at any rate the four posterior ones) have no terminating spiny point or finial, or if there be one it is very small and blunt, a mere corneous tip. The spinners are very short, compact, and placed about halfway between the thoracic pedicle and the extremity of the posterior prominences. The abdomen is black, covered with very short grey hairs and a few erect bristles, the various prominences and some other patches on the upperside being brown; the whole appears to be covered thickly with small black granulosities. The genital process is strong, prominent, directed backwards, and terminating with a small obtuse epigyne.

*Hab.* MEXICO, Rincon in Guerrero, at an elevation of 2800 feet (*H. H. Smith*).

I include this spider somewhat doubtfully in the genus *Turckheimia*, as it has spines on the legs, which are not present in the typical species.

## AZILIA, Keyserling.

### **Azilia affinis,** sp. n.

*Adult female*, length $3\frac{1}{3}$ lines.

*Cephalothorax* of normal form ; it is yellow in colour, with a broad well-defined longitudinal central dark brown band ending in a trifid form just behind the eyes, and with an angular prominent point on each side of the thoracic indentation. The oblique grooves denoting the junction of the caput and thorax are marked with a short curved dark brown streak, and on each side of the thorax is a broad band of the same hue, touching the margins at the fore part and at the caput.

*Eyes* normal ; the interval between those of the hind-central pair is slightly greater than that between each and the hind-lateral eye next to it.

*Falces* deep brown, tinged with reddish.

*Legs* moderately long, tolerably strong, 1, 2, 4, 3, furnished with hairs and spines ; colour yellow, distinctly annulated with deep blackish-brown ; the spines spring from small spots of a similar hue, giving a distinctly speckled appearance to the legs.

*Palpi* yellow, with blackish annuli.

*Maxillæ* and *labium* dark brown.

*Sternum* dark brown, with a central longitudinal yellow streak.

*Abdomen* blackish, with a longitudinal central pale dusky stripe on the fore half of the upperside, marked also with dusky and white spots, showing a pattern of broad blackish transverse bars and fine white transverse lines ; a not very distinct but diffused curved white bar encircles the fore margin and ends on each side with an enlarged white spot. The whole of the upperside is covered with short fine greyish hairs ; and thus the distinctive pattern is not easily observed. On the underside, between the genital aperture and the spinners, is a large, somewhat quadrate white patch. Spinners short, compact, yellow, with a broad blackish stripe on each. Genital aperture small, but characteristic in form.

This spider is nearly allied to *Azilia guatemalensis*, Cambr. (*antèa*, p. 12, Tab. III. figg. 3, 4), but may be distinguished at once by the legs being not only annulated with dark brown, but spotted with black ; the pattern on the cephalothorax also differs a little as well as that of the abdomen, especially the large quadrate white patch underneath ; the genital aperture is likewise of a different form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## KAIRA, Cambridge.

### **Kaira dromedaria,** sp. n.

*Adult female*, length 5 lines ; length of abdomen from the spinners to the summit of the highest hump, nearly 7 lines.

*Cephalothorax* yellow-brown, clothed with greyish pubescence ; a large somewhat quadrate area on the fore part of the caput, including the ocular area, is dark blackish-brown, and on each side of the thorax are some ill-defined converging brownish stripes.

*Eyes* small ; the four centrals, seated on a tubercular prominence, form a small quadrangular figure, almost a square, and each lateral pair is a little further from the anterior central eye on its side than the anterior centrals are from each other.

The *legs* are short, 1, 2, 4, 3, not very strong, those of first two pairs the strongest ; the tibiæ and metatarsi of the 1st and 2nd pairs are rather bent, the femora strongly but not abruptly tumid on the uppersides. They are of a dark brown colour, tinged with red-brown, indistinctly marked in parts with blackish ; clothed with greyish hairs, and armed with spines, of which those on the inner side of the tibiæ and metatarsi of the 1st and 2nd pairs are most numerous, those on the metatarsi and tibiæ of the 3rd and 4th pairs fewer in number and less strong.

*Palpi* moderately long, the digital joint longer than the cubital and radial joints together. They are rather lighter coloured than the legs, and are furnished with hairs, bristles, and spines.

The *falces* are moderate in length and strength ; of a yellow-brown colour, clouded towards their extremity with darker brown.

*Maxillæ* short, rounded at the extremities; *labium* short, about half the length of the maxillæ. These parts are yellowish-brown, tipped narrowly with pale whitish.

*Sternum* small, and of a reddish-brown hue.

*Abdomen* large, the upperside elevated, almost perpendicularly, in a somewhat subcylindrical form, to a great height; it leans forwards, however, over the cephalothorax. The length from its pedicle to the spinners is but a little over 2 lines, from the spinners to the highest extremity nearly 7 lines. On the posterior side, about two-thirds of the way to the summit, is a strong hump or prominence, with two small subconical eminences, one on each side of it in a transverse line. The summit is broad, bluff, and has on its posterior edge two subconical eminences, larger than those on the lower hump, and placed also in a transverse line. The abdomen is of a pale yellowish-brown colour, clouded for the most part with blackish; it is mottled thickly with whitish on the lower part of the sides, and in parts has numerous very short more or less clavate black hairs. The spinners are short and compact. The genital process is prominent, not very large, somewhat rounded, of a deep red-brown hue, and with a small, somewhat flattened, curved epigyne bending over backwards from its fore extremity.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith has the following note on this spider:—"I found it struggling in the grasp of a wasp which was stinging it; it had let itself down wasp and all from a mass of brush and dead sticks near the bank of the river edge of the forest. The peculiar form and colour of the spider is evidently a protective resemblance; when sitting on the end of a dry stick of about the same diameter as its own body it would have the appearance of a broken end of the stick itself; or if sitting on the side of a stick the abdomen would appear like the stump of a dead branch broken short off diagonally. I have found several curious longicorn beetles which are protected in the same way." The above observation is no doubt a just one, but evidently the protection afforded against the wasp was not very efficacious.

## MIAGRAMMOPES, Cambridge.

### **Miagrammopes mexicanus,** sp. n.

*Adult female*, length $4\frac{1}{2}$ lines.

In form and general structure this spider is entirely normal.

The *cephalothorax* is oblong, its length nearly double its breadth, the four corners rounded; the sides project over the sternal surface in a kind of flap; the upper surface (looked at in profile) is somewhat flattened and the middle of the clypeus is a little projecting. It is of a black-brown colour, clothed with fine short grey hairs.

The *eyes* are small, four in number, two in a rather oblique transverse line on each side of the caput forming a long curved line whose convexity is directed forwards. They are seated on tubercles, that of the exterior eye on each side being much the strongest. (Monsieur Simon, Hist. des Araignées, 2nd ed. 1892, p. 217, states that both Dr. Berkan and himself have discovered in this genus two or four additional eyes, exceedingly small and generally only to be seen under microscopic power. I cannot find these in the species I have as yet examined. It is, however, possible, and indeed probable, that these will be found in some species and not in others; they are evidently in different degrees of evanescence, having probably passed, or are passing, through the various stages of disuse, atrophy, indistinctness, and final disappearance.)

The *legs* are very disproportionate in relative length, those of the first pair greatly the longest and strongest, those of the third pair the shortest and weakest, and the second almost the same; the first pair are as long as or longer than the entire spider, the fourth, which are next in length, a little longer than the abdomen, and furnished with a strong calamistrum at least two-thirds of its length on the upperside. The tarsi

are all very short. (There are no hairs or spines on the only example seen, but possibly these have been rubbed off.) The first pair of legs are black, excepting the tarsi and tip of the metatarsi, which are of a dull reddish-brown hue; the other legs are brown, suffused in parts with blackish. The coxæ of the second pair are almost contiguous to each other, and quite so to the coxæ of the first pair, thus entirely concealing the maxillæ and labium, being thrust out (as it were) altogether at the fore extremity of the sternal surface, which differs from that of spiders in general in having the legs set into a convex surface, and not round and above the edge of a definitely formed plate.

The *falces* are short, weak, prominent, and of a pale whitish-yellow colour.

The *palpi* are very short, slender, and of a brownish hue.

The *abdomen* is large, subcylindrical, or narrow elongate-ovate in form; looked at in profile it is a little humped towards the anterior extremity. Its colour above and on the sides is black; on the fore part of the upperside are four white spots forming an oblong figure, and each side is marked with four oblique parallel dull yellowish-white stripes or dashes, nearly equidistant from each other; at the lower extremity of the second stripe from the anterior end is a diffused brownish-yellow marking. The underside is yellowish-brown. The genital aperture is of a characteristic form.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## PAPHLAGON, gen. nov. (Epeiridæ.)

*Cephalothorax* oval, of a flattened form, as broad as long, obtusely pointed in front, the lateral impressions at the caput moderate.

*Eyes* very unequal in size, those of the hind-central pair much the largest, the rest small and not very different in size. The four centrals form a large trapezoid much broadest behind, and are seated on a strong tuberculiform prominence and each also on an independent eminence. A little way off on the outer side and behind each hind-lateral eye is a lateral pair, very minute, contiguous to each other, and seated on a slight tubercle.

*Legs* rather short, 4, 1, 2, 3, slender, not greatly unequal in length, furnished with hairs only, excepting two short fine spines on the inner side of the femora and two or three on the tibiæ of the first pair. The tarsi end with three claws, opposed to which are some other supernumerary ones.

*Maxillæ* short, broad, obtuse, and bent to the labium.

*Labium* short, much broader than long, of a somewhat subtriangular form, very obtusely pointed at the apex.

*Sternum* shield- or heart-shaped.

*Abdomen* short, oblong-oval, very obtuse at each extremity; some small conical tuberculiform prominences chiefly at the posterior extremity.

### **Paphlagon beatus,** sp. n.

*Adult female*, length slightly over 3 lines.

*Cephalothorax* yellow, thickly covered with strong granulations, especially on the sides of the thorax; no impression at the junction of the caput and thorax when looked at in profile; the height of the clypeus is only equal to the diameter of one of the fore-central eyes. Eye-tubercles black.

*Eyes* of the hind-central pair with the lateral pairs forming a slightly curved transverse line, the convexity of the curve directed forwards. The interval between the eyes of the hind-central pair is much greater than that between each and the lateral pair next to it.

*Legs* and *palpi* similar in colour to the cephalothorax.

*Falces* short, moderately strong, straight, vertical; rather prominent near their base in front, and similar to the legs in colour; three or four short teeth of unequal length at their extremity on the inner side; fang short and curved.

*Maxillæ* and *labium* similar to the falces in colour.

*Sternum* rather paler.

*Abdomen* large, of a luteous-yellow hue, marked sparingly with small cretaceous spots along the middle and sides of the upper part; traces of some black lines are visible on the steep posterior slope or bluff end above the spinners. There are seven conical tuberculiform eminences on the upperside—one in the

middle of the fore extremity, two wide apart across the middle, and, with these last, two others at the top of the posterior slope form nearly a square, while the two remaining ones are lower down towards the spinners, but placed much wider apart; the anterior sides of all these eminences, excepting that at the fore extremity, are black. The spinners are short, 2-jointed, and compact. The genital aperture is small, but of very characteristic form.

It is most probable that the colours and markings above given of the abdomen would be found in other specimens to vary considerably, as the type example appears to be in a faded, washed-out condition, from the action of the spirit in which it is preserved.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## PHILODROMUS, Walckenaer.

### **Philodromus maculatipes,** sp. n.

*Adult male*, length 3 lines.

*Cephalothorax* of equal length and breadth, and, generally, of normal form, round behind, obtusely pointed before on the upperside in the ocular region, squarely truncate below at the clypeus, which last is prominent and its extent equal to rather more than half that of the facial space; the clypeus is furnished with strong curved bristles, as also are the sides of the ocular area; the lateral marginal compressions at the caput are strong. Its colour is yellow-brown, slightly tinged with reddish; the sides are dark brown, with a radiate appearance, the radiations converging at the thoracic junction; and at the posterior extremity of the caput is a strong **V**-shaped dark brown marking, whose point is directed backwards—viewed under a lens this marking is seen to be composed of numerous small black spots.

The *eyes* are small, subequal, seated on black tuberculate spots. They form, perhaps, a less crescent-shaped than subtriangular area; each lateral pair forming with the fore-central eye on its side a very nearly straight line. The eyes of the hind-central pair are much further from each other than each is from the hind-lateral eye on its side.

The *legs* are long, rather slender; those of the second pair are longest, next those of the first pair, which are, however, scarcely longer than the fourth, and (probably) the third pair are shortest, but in the only examples seen of this spider both of the third pair are wanting. They are (except the tarsi) armed with rather fine spines and hairs; their colour is pale brownish-yellow, speckled with small irregular black spots. The tarsi and a portion of the metatarsi of the first and second pairs have a thin scopula beneath them, and all have a claw-tuft.

The *palpi* are short, similar to the legs in colour and armature; the cubital and radial joints are nearly equal in length, the latter perhaps is slightly the longer and has, at its extremity on the outer side, a short, tapering, obtusely pointed dark-coloured apophysis, beneath which is another paler one of the same length but stronger. The digital joint is not very large, narrow-oval in form, with some long prominent curved spines at its base above, and at its extremity are several short, black ones of a denticulate nature. The palpal organs are simple, consisting of an oval lobe, round the anterior extremity of which is a strongish curved sharp-pointed spine whose point is directed rather downwards on the outer side.

The *falces* are moderately strong, slightly longer than the facial space, vertical, conical, furnished with strong, prominent spines in front, and of a dark brown colour. The fangs are short and strong.

The *maxillæ* are long, rounded at the extremity, inclined towards the *labium*, which is about two-thirds the length of the maxillæ, short-oblong in form, rounded at the apex, and rather constricted laterally towards the base. The maxillæ are similar to the legs in colour, but rather darker towards the extremities; the labium is dark yellow-brown.

The *sternum* is broad, heart-shaped, and of a brownish-yellow hue.

The *abdomen* is of a somewhat oblong-oval form, broadest behind; the fore extremity is distinctly cleft or emarginate in the middle. It is clothed with hairs, and is of a general dull blackish colour mixed with dull whitish; on the fore part of the upperside is a longitudinal central deep black-brown stripe, indistinctly visible, followed towards the spinners by some fine dull whitish angular lines or chevrons. The spinners are short, rather compact, and of a dark brown hue.

*Hab.* MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

## MISUMENA, Simon.

### **Misumena ornata,** sp. n.

*Adult female*, length 4 lines.

In form this spider resembles very nearly the common European species, *M. vatia*, Clk.

The *cephalothorax* is yellowish-white; the clypeus, the ocular region, and a broad longitudinal band on each side are bright pink, and a white **V**-shaped marking, whose point is directed backwards, is placed just in front of the thoracic junction. The height of the clypeus is equal to nearly half that of the facial space.

*Eyes* in form of a crescent, very small, subequal, the fore-laterals slightly largest; seated on slight tubercles, excepting those of the fore-central pair. The four central eyes form very nearly a square; the interval between the hind-centrals is rather less than that between each and the hind-lateral on its side.

The *legs* are normal, 1, 2, 4, 3; the two anterior pairs are much the longest and strongest, and of a bright pink hue, excepting the tarsi and metatarsi, which are yellow-brown; the third and fourth pairs are short, and plain yellowish, excepting the coxæ, which are pink. The first and second pairs have the metatarsi tumid beneath, with nine pairs of short spines in two longitudinal rows; and there are a few spines beneath the tibiæ. The third pair have only a very few spines on the inner side of the fore end of the metatarsus, and the fourth pair only one beneath that joint.

The *palpi* are yellowish.

The *falces* are normal, of a bright pink colour, with the tips and a small spot near them on the outer side yellowish-white.

The *maxillæ* and *labium* are pink, tipped with yellowish; the *sternum* is entirely pink.

The *abdomen* is large, much the broadest behind, where it is rounded above and on the sides, and slightly pointed at the spinners. It is of a yellow-white colour, having the usual "Thomisiform" pattern on the upper-side of a bright pink colour, like the anterior legs and other parts already described; this pattern, no doubt, would be found to vary somewhat according to whether the yellowish ground-colour or pink prevailed in different specimens. The genital aperture is small but of characteristic form; it is surrounded by an irregular pink zone, and from it to the spinners is a straight well-defined pink band or stripe. The anterior pair of spinners have a single pink annulus on a whitish ground; and the upperside of the anal prominence is also pink, margined with yellowish. An immature specimen has no pink stripe on the underside, nor any of this colour on the spinners or anal prominence; and in this specimen also the hinder sides of the femora of the first and second pairs of legs are marked with a yellowish longitudinal stripe, and the posterior part of the sternum is yellow.

*Hab.* MEXICO, Hacienda de la Imagen and Amula, both in Guerrero (*H. H. Smith*).

## SYNÆMA, Simon.

### **Synæma culta,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

*Cephalothorax* very slightly, if at all, longer than broad, of a bright dark red-brown colour, deepest on the sides; smooth, glossy, and furnished with only a very few bristly hairs.

*Eyes* on pale yellowish tubercles, small; the fore-laterals rather the largest, and on the strongest tubercles. The four central eyes form nearly a square, whose anterior side is a little the shortest. The interval between those of the hind-central pair is very nearly, if not quite, equal to that between each and the hind-lateral eye next to it. The height of the clypeus is less than half that of the facial space.

*Legs* moderate in length, 2, 1, 3, 4, tolerably strong. The first and second pairs are the longest and strongest, and nearly equal in length. The tarsi, metatarsi, and the posterior half of the tibiæ of these two pairs are yellow, the rest being similar in colour to the cephalothorax; the colour of the two posterior pairs is entirely yellow; all are armed with rather long but not very strong spines. The *palpi* are yellow.

The *falces* are strong, conical, vertical, similar to the cephalothorax in colour, tipped with yellowish. The

*maxillæ*, *labium*, and *sternum* are also similar in colour, the extreme tips of the maxillæ and labium whitish-yellow.

The *abdomen* is of a short broad-oval form, slightly pointed behind, and of the usual somewhat flattened form. Its colour is black; on each side of the upper surface towards the hinder extremity is a large irregular bright rather pinkish-red patch, leaving the black in that part to represent, in a suffused or irregular manner, the usual transverse angular bars or chevrons. The upperside is also spotted with small white points, the chief of them being the five normal impressed punctures, in a longitudinal series of two transverse rows of two each, two corresponding, one behind, and a single central one in front. The sides are longitudinally rugulose, the rugæ marked with minute yellowish-brown dots. The upperside has a few strong black tapering bristles on its surface. The underside has on its jet-black surface a longitudinal series of ten or twelve minute white points in two rows, converging from the genital aperture to the spinners. The colour of the spinners is dark yellow-brown. The genital aperture is of a characteristic form, with a deep black-brown border just in front of it.

*Hab.* MEXICO (*H. H. Smith*).

No number accompanied this spider to indicate its exact locality.

## **Synæma interrupta,** sp. n.

*Adult male*, length $1\frac{2}{3}$ lines.

*Cephalothorax* of normal form, smooth, glossy, showing none of the normal indentations; colour deep rich brown, slightly paler at the fore extremity; a few strong prominent spine-like bristles on the caput and hinder slope; height of the clypeus nearly but not quite equal to half that of the facial space.

*Eyes* in form of a regular crescent, occupying the whole width of the upperside of the fore extremity of the caput. The four centrals form a quadrangle broader than long, its hinder side being very slightly the longest, and the eyes forming it the smallest of the eight. The eyes of the fore-central pair are distinctly wider apart than each is from the fore-lateral eye on its side; the fore-laterals are slightly the largest of the eight; the interval between the hind-central pair is slightly greater than that between each and the hind-lateral eye next to it. All are on tubercles, those of the four centrals very slight.

*Legs* strong, 2, 1, 4, 3, those of the second pair very slightly, if anything, longer than those of the first pair, armed, excepting the tarsi, with strong spines, those beneath the tibiæ arranged in *three* pairs, beneath the metatarsi in *two* pairs. The tarsi end with two curved pectinated claws, beneath which is a tuft of bristly hairs opposed to them. The colour of the femora and tibiæ of the first two pairs is similar to that of the cephalothorax, the hinder half of the tibiæ as well as the metatarsi and tarsi yellow; the whole of the third and fourth pairs being also yellow.

The *palpi* are brownish-yellow, short; the cubital and radial joints of equal length, armed with a few strong, spine-like, tapering bristles. The cubital joint has a small, prominent, slightly curved, and rather obtusely pointed apophysis at its anterior extremity on the outer side. The digital joint is rather small; it is equal in length to the radial and cubital joints together. The palpal organs are simple, and closely margined with a long, black, filiform, tapering spine.

The *falces* are strong, conical, vertical; the basal half in front deep brown, like the cephalothorax; the rest yellow-brown.

The *maxillæ*, *labium*, and *sternum* are of normal form, of a brownish-yellow colour, the sternum dark brown along the middle.

The *abdomen* is of a short-oval form, flattish above; its upperside is furnished with a few long, prominent, tapering, spine-like bristles. Its colour is yellowish-white, and a large patch of the same colour as the cephalothorax, with two angular points on each side, occupies a considerable portion of the hinder half of the abdomen, and reaches to the spinners; connected with this patch is a lateral longitudinal stripe on each side of the same colour, and which also encircles the spinners. The whole of the central area of the underside is of a similar deep rich brown colour and margined with white. A marginal band to the dark patch on the upperside is whiter than the rest.

A not quite adult female differs from the male in having the legs shorter, all of them yellow, excepting a small deep red-brown patch underneath the hinder extremity of the tibiæ of the first and second pairs.

The colours and pattern of the abdomen are similar to those of the male, though the dark patch on the upper-side suffuses itself more on the sides of the hinder part, thereby obliterating the posterior angular points.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## ERIPUS, Walckenaer.

### **Eripus trifidus,** sp. n.

*Adult female*, length $2\frac{2}{3}$ lines; height of the abdomen from the spinners to the summit of the central prominence a little over 3 lines.

*Cephalothorax* broad, rounded behind, and strongly constricted on the sides forwards, narrow in front. The ocular region a little elevated, and sloping from behind that gradually up to the beginning of the posterior slope, which is short and roundish in profile. Its colour is a pale yellow, with a broadish central longitudinal dark brown band reaching to the ocular area and subdivided longitudinally by a yellow line, each of the subdivided parts being continued forwards in a narrow stripe from the eyes to the lower margin of the clypeus, which itself has a diffused brown marking in the middle. The sides of the caput and thorax are marked with a border of broken brown markings. The surface of the cephalothorax is furnished with numerous pale erect coarse hairs, among which are some longer black obtuse bristles in the median line.

The *eyes* are small, four form a central quadrangle, whose length is greater than its breadth, and each lateral pair is seated at the base of a pointed prominence near the hind-lateral eye on that side. The height of the clypeus appears to be about half that of the facial space.

The *legs* are short, tolerably strong, 1, 2, 4, 3; they are similar in colour to the cephalothorax, the femora of the two hinder pairs marked with blackish underneath, and all are profusely armed with bristles and strong spines, many of the latter having the appearance of being articulated to tubercular prominences of a spiny nature, especially on the tibiæ, metatarsi, and femora of the first and second pairs.

The *falces* are moderately long, not very strong, a little inclined backwards, yellow, with a longitudinal brown stripe in front of each falx.

The *palpi* are similar to the legs in colour, short, and faintly annulated with brown.

The *maxillæ* are short, somewhat rounded at their extremities, and inclined towards the labium.

The *labium* is short, rather less than half the length of the maxillæ, and rounded at the apex. The colour of these parts is yellow, clouded in part with blackish-brown.

The *sternum* is heart-shaped and yellow.

The *abdomen* is short, but greatly elevated, being gradually drawn out above into a tall, tapering, central eminence, with another short one at some little distance on each side of it and divergent from the central one. All three have a somewhat spine-like termination, tipped with two or three short bristles. The abdomen is of a yellowish-white colour, with a longitudinal central tapering yellow-brownish band, margined in part with blackish, and running from the middle of the fore extremity to the tip of the central eminence; another more diffused black or brownish band or marking on each side runs similarly to the top of each of the lateral eminences, and from the side of the base of each of these a blackish stripe runs perpendicularly downwards to near the spinners; the central eminence also has a yellow-brownish longitudinal stripe on each side, and one behind; near the middle of the upperside in a transverse line are two roundish conspicuous black spots, one on each side of the central stripe. The whole of the upper part and sides are furnished with long, strong, erect, rather obtuse, spine-like bristles. The genital aperture is small but of characteristic form, and the spinners are short and compact.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## COCCORCHESTES, Thorell.

### **Coccorchestes scarabæoides,** sp. n.

*Adult male*, length $\frac{1}{18}$ of an inch or $\frac{2}{3}$ of a line; *adult female*, length scarcely 1 line.

*Cephalothorax* nearly quadrate, slightly broader than long, of a uniform convexity above, with none of the ordinary grooves or indentations; hinder slope nearly vertical. Colour black; the surface shining,

thickly impressed with minute punctures, and thinly clothed with short fine hairs. Looked at in profile, the cephalothorax slopes forward in a uniform curved line from the hinder slope to the eyes.

*Eyes* very unequal in size, forming a transverse quadrangle on the whole upper surface of the caput, the width of the quadrangle nearly equalling double its length (from back to front). The fore-central pair of enormous (comparative) size, almost contiguous; those of the second row nearer to the fore-laterals than to the hind-laterals and very minute.

*Legs* short, strong, bright orange-yellow, except the femora, which are tinged with brown, furnished with hairs and destitute of spines. Their relative length is very difficult to note, 4, 3, 1, 2 or 4, 1, 3, 2, but they appear to differ very little.

*Palpi* short, dark yellowish-brown, the digital joint furnished with pale greyish hairs; cubital and radial joints very short, but of about equal length; the latter is the strongest and has a small pointed apophysis at its extremity on the outer side. Digital joint rather small, of narrow-oval form; palpal organs simple, but well developed and rather prominent.

*Falces* rather small, straight, vertical, almost concealed beneath the clypeus, and of a dark brown hue.

*Maxillæ* short, broad at the extremities; colour brown, paler at the extremities.

*Labium* short, pointed at the apex, brown, the apex paler.

*Sternum* small, oval, deep black-brown.

*Abdomen* covered on the upperside with a large, nearly circular, convex, shield-like coriaceous epidermis, of a shining deep steel-blue colour, slightly purple in some lights; impressed with very minute scattered punctures, and clothed thinly with very short fine hairs. It is somewhat curvitruncate before, and fits up close over the hinder slope of the cephalothorax, so as to continue the upper convexity of the latter with an even and opposite curve in an unbroken line to the posterior extremity, looking like a single piece. The underside is brown and rugose, with yellowish markings. The spinners are short, compact, of a brownish hue; concealed beneath the upper covering of the abdomen, until turned upside down.

The female resembles the male in form, colours, and general characters.

*Hab.* PANAMA, Bugaba (*Champion*).

This curious little Salticid might well be mistaken for a minute beetle or hemipteron. It would be interesting to know whether it has any powers of leaping; the almost uniform length of the legs gives an idea that it is not a jumper.

## OCHYROCERA, Simon * (Dysderidæ).

### **Ochyrocera simoni,** sp. n.

*Adult male*, length $1\frac{1}{4}$ lines.

*Cephalothorax* short, oval, rather flattened, convex above, very strongly constricted laterally on the margins at the junction of the caput and thorax, the anterior extremity broadly truncate. Clypeus strongly porrected, and nearly equal in longitudinal extent to the length of the falces, the thorax and upper part of the caput being nearly circular. It has a few long bristles on the caput and thorax, and its colour is a clear pale green, with a broad central black band extending through the ocular area to the hinder extremity, to which it gradually widens from the eyes. A similar broad black band also occupies each side of the thorax, gradually coming to a point at the junction with the falces.

The *eyes* are in three pairs on tubercles, forming a transverse straight line (at least the three groups are in a straight line); the central pair are in a transverse line, and those of each lateral pair are nearly contiguous and placed obliquely, so that the centrals taken with either the anterior or posterior eyes of the lateral pairs singly form in reality a curved line (the curve formed by the centrals and fore-laterals being less than that of the centrals and hind-laterals). The eyes of the central pair are very nearly contiguous to each other, and each is nearly a diameter's distance from the fore-lateral on its side.

The *legs* are very long, 1, 4, 2, 3, slender, furnished with hairs only. The coxæ of the first and second pairs,

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* P. Z. S. 1891, p. 565.

especially of the first, are much stronger than the rest, and the femora are rather curved and clavate, the lower extremities being gradually incrassated to at least double the thickness of the anterior portion. The tarsi end with two claws issuing from a small and distinct claw-joint; they are of a dull olive-greenish colour, a small portion at the extremities being yellowish. The greater part of the genuæ is black, and there is also a small part of the extremity of the other joints approaching to black, giving the legs a somewhat annulated appearance at those joints. The metatarsi and tarsi are yellow-brownish, the end of the latter paler.

The *palpi* are short, similar to the legs in colour. The cubital joint is very short, with a long, strongish, tapering bristle at its fore extremity above; the radial joint is long and strong, and rather of a tumid form, furnished with strongish bristles or bristly hairs. The digital joint is long, about equal to the radial in length, distinctly curved, and tapers to a sharp spine-like point at its extremity; it is furnished with numerous long bristly hairs, chiefly along the inner side; rather beneath, on the inner side, is a strong lobe or prominence, to which, underneath, is attached the palpal bulb, the latter of an oval form at its base, with its extremity produced into a very long, tapering, sharp-pointed, corneous process.

The *falces* are moderate in length and strength, straight, but considerably porrected, and similar to the legs in colour. On the underside of the oblique extremity of each falx is a tooth-like ridge, followed to the end of the falx by a row of three closely-set minute teeth.

The *maxillæ* are long, strong, especially near their base, straight, rather rounded, pointed at their extremity, and considerably inclined to the labium; their colour is like that of the falces.

The *labium* is slightly suffused with blackish, of abnormal size, its base extending to the whole width of the sternum, and of an equilateral triangular shape, its apex obtusely pointed; it is similar in colour to the maxillæ, which, instead of being placed in the normal position, *i. e.* close to the sternum, on each side of the base of the labium, appear to issue from it some little way up on each side. Behind the labium the tongue is visible like an inner labium, it being obtuse at the end; it reaches nearly to the extremity of the maxillæ, and is tipped with a group of brown papilliform projections. On the inside of the maxillæ is (apparently) a membranous enlargement, which I have not noticed before in any other spider.

The *sternum* is short, heart-shaped, of a blackish hue, with a greenish longitudinal central stripe and greenish spots on the margins.

The *abdomen* is elongate oval, or somewhat subcylindrical in shape, joined to the thorax by a short distinct pedicle. Its colour is black, with a longitudinal central bluish-sea-green stripe, and several oblique stripes of the same colour on each side, the anterior being the longest and strongest, reaching nearly to the spinners; the underside has two similarly coloured spots about the middle in a transverse line. The spinners are short, the outer four about equal in length, black, with a spot on the outer side at the base, and the tip greenish white.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

This curious spider appears to belong to M. Simon's recently characterized genus *Ochyrocera*, based on two species discovered in the Island of St. Vincent; but no notice is taken in the generic diagnosis (*l. c.*) of the unusual characters furnished by the maxillæ and labium.

## MYRMECOTYPUS, gen. nov. (Drassidæ).

*Cephalothorax* oblong-oval, broadest and truncated in front. Lateral marginal indentation at the caput slight. Caput marked off from the thorax by a continuous and tolerably strong constriction. Thorax very tumid or gibbous on the upperside behind; hinder slope short, abrupt, its profile line slightly incurved. The posterior end of the thorax drawn out in a sheath-like form to receive the pedicle connecting it with the abdomen.

*Eyes* unequal in size, and forming a large crescent; they are placed in two slightly curved rows, the curve of the anterior row directed forwards, that of the posterior backwards, though this latter row is the longest and nearly straight. The fore-central pair are the largest, the rest subequal, the hind-centrals rather the

smallest. The four central eyes form a square. The interval between the eyes of the fore-central pair is equal to a diameter, and that between the hind-central pair is double that between each and the hind-lateral eye next to it. The hind-central eyes are on the flat surface of the caput, the rest on slight eminences. The eyes are all dark-coloured. The clypeus is prominent below, and its height is equal to one and a half diameters of one of the fore-central eyes.

*Falces* moderate in length and strength, their profile strongly curved.

*Legs* moderately long, not very unequal in length, slender, 4, 1, 2, 3; the two posterior pairs strongest; terminal tarsal claws 2? (owing to a dense claw-tuft these cannot be satisfactorily made out). They are armed with a few rather long slender spines, some of which are arranged in pairs beneath the tibiæ and metatarsi. The coxæ of the fourth pair are contiguous.

*Palpi* long; digital joint somewhat clavate, its length rather exceeding that of the radial and cubital joints together.

*Maxillæ* strong, slightly divergent at the upper extremity, and obtusely and rather roundly truncated.

*Labium* short, less than half the length of the maxillæ; the outer margins curved and the apex truncated.

*Sternum* heart-shaped.

*Abdomen* short-oval, broader and deeper behind than before, connected by a short but distinct pedicle with the thorax, the pedicle arising from a short sheath-like prominence on the abdomen. Spinners short, strong, compact, those of the superior pair two-jointed, the terminal joint very short. Immediately in front of the spinners is a rather large, conspicuous, transverse opening protected by a prominent lip, and no doubt leading to a spiracular organ.

### **Myrmecotypus fuliginosus,** sp. n.

*Adult female*, length slightly over 3 lines.

*Cephalothorax* black, clothed thinly with prominent pale greyish hairs, a few of which on the ocular area and clypeus are stronger than the rest, and symmetrically placed; on the anterior upper surface of the thoracic region is a large patch of grey pubescence.

*Legs* clothed with greyish hairs and spines (as noted among the generic characters). Those of the first and second pairs have the femora and tibiæ pale brownish-yellow, striped with deep blackish-brown; the metatarsi dark brown, the tarsi paler. The other two pairs are dark brown.

*Palpi* dark brown; digital joint paler, furnished with hairs and several spines.

*Falces* deep black-brown in front, and furnished with pale bristly hairs. Colour pale yellowish on their inner sides; at their extremity just above the fang is a thick tuft of long pale and black bristly hairs forming a strong fringe close in front of the falces.

*Maxillæ* black-brown, margined at their extremity and on their inner side with whitish.

*Labium* black-brown, the apex pale whitish.

*Sternum* black-brown.

*Abdomen* sooty-black; clothed with erect pale hairs, and a short dense whitish pubescence mixed with a little rusty yellowish. On the upper part, rather towards the sides, are several jet-black markings, apparently formed by short erect densely set hairs. The genital aperture is black, not very conspicuous, but of characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## ANYPHÆNA, Sundevall.

### **Anyphæna simplex,** sp. n.

*Adult male*, length 3 lines; *adult female*, length $3\frac{1}{2}$ lines.

The whole of the fore part is of a yellowish colour.

The *cephalothorax* is of normal form, marked on the sides with some indistinct converging darkish markings, and covered thinly with fine pale hairs. The height of the clypeus does not exceed the diameter of one of the fore-central eyes.

The *eyes* are compact, small, subequal, placed on black spots in two transverse curved rows, the anterior row

shortest and nearly straight, the convexity of the curves directed away from each other. The interval between those of the hind-central pair is equal to a diameter, and is a little greater than that between each and the hind-lateral eye next to it. The eyes of the anterior row appear to be about equally separated from each other.

The *legs* are tolerably long, 4, 1, 2, 3, or 1, 4, 2, 3, moderately strong, armed with a fair number of spines, except on the tarsal joints, some of the spines being rather long; beneath the two claws at the extremity of the tarsi is a small claw-tuft. In front of each of the coxæ of the first pair is a strongish tooth-like prominence.

The *palpi* of the male are moderately long and strong. They are similar in colour and armature to the legs. The humeral joint has three short, strongish, black spines at its fore extremity in a transverse line on the upperside, and a single one a little way behind them. The cubital joint has at its fore extremity on the upperside a small, roundish, shining red-brown tubercle. The radial is about equal in length to the cubital joint, and has at its outer extremity underneath (and from beneath a fringe of coarse hairs) a straight, rather strong, corneous apophysis pointed at the end, and with another but smaller projection at its base on the outer side. The digital joint is rather large, elongate-oval, and of a dark yellow-brown colour. The palpal organs are well developed, not very prominent, nor very complex.

The *falces* are straight, moderate in length and strength.

The *maxillæ*, *labium*, and *sternum* are normal in form.

The *abdomen* is oval, pointed behind, of a pale dull yellowish colour, the upperside marked obscurely with yellow-brown; chiefly noticeable are a series of slightly elongate spots in pairs along the middle of the posterior half of the upperside; on the underside midway is the characteristic transverse curved opening to a spiracular organ.

The female resembles the male in colours and markings. The genital aperture is well marked and of very characteristic form.

*Hab.* Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

## STEMMOPS, gen. nov. (Theridiidæ).

*Cephalothorax* as broad as long, very nearly round, slightly broader behind than in front; considerably and uniformly convex above, showing no traces of the normal grooves and indentations. Clypeus high, more than half the height of the facial space.

*Eyes* large, subequal, those of the hind-central pair the largest, seated on a large subconical prominence and forming a kind of irregular ring round it, the intervals between them being narrow and very nearly equal. The four centrals form a trapezoid longer than broad, and a little wider behind than in front.

*Legs* rather short, 1, 4, 2, 3, moderately strong, furnished with numerous coarse bristly hairs, with a strong erect bristle at the fore extremity of the genuæ, and one or two less strong on the tibiæ.

*Palpi* moderately long; digital joint and palpal bulb of very large size.

*Falces* small, neither long nor strong.

*Maxillæ* short, very strong, straight, but greatly inclined over the *labium*, and pointed at their extremity.

*Labium* small, oval, drawn out and pointed at the apex, which reaches nearly to the points of the maxillæ, being thus of an inverted pear-shape.

*Sternum* rather broad, convex, heart-shaped.

*Abdomen* oval, moderately convex above, clothed with numerous long curved bristly hairs. Spinners short, compact, and cone-shaped; and close in front of them is a small transverse slit or opening, with dark red-brown lip, no doubt the orifice of a spiracular organ.

### **Stemmops bicolor**, sp. n.

*Adult male*, length 1 line.

The *cephalothorax*, *legs*, *palpi*, *falces*, *maxillæ*, and *labium* are yellow tinged with orange, the cephalothorax with a narrow black margin. The eye-prominence black.

The *eyes* are closely arranged in a transverse oval figure round the eye-prominence, or in two transverse rows,

the posterior row straight, the anterior curved. The intervals between those of the posterior row are very small, but that between the central pair is rather greater than that between each and the hind-lateral eye next to it, this last interval is also equal to that between the eyes of each lateral pair. The interval between those of the fore-central pair is nearly about equal to that between the hind-centrals, and each is contiguous to the fore-lateral eye on its side.

The *palpi* have the cubital joint short but bent, the radial joint very short. The digital joints are very large, oval, and their convex sides are directed towards each other. The palpal organs are highly developed and rather complex; they are encircled by a long black tapering spine, which issues from their underside and, coiling round the basal margin and outer side, has its sinuous filiform point in contact with some other corneous processes at their extremity.

*Falces* vertical, weak, a little divergent at their extremity.

*Sternum* yellowish, suffused with brown.

*Abdomen* yellow-brown, and (when seen in spirits of wine) closely mottled with yellowish points. Above the spinners is an indistinct pale spot.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

This spider is allied to the genus *Umfila*, Keys., but is certainly, I think, distinct.

## MESOPNEUSTES, gen. nov. (Theridiidæ).

*Cephalothorax* longer than broad, oval, obtuse at its narrow end in front, but without lateral marginal impressions at the caput. Height of clypeus greater than half that of the facial space, in fact nearly about equal to the width of the falces in front, moderately convex above.

*Eyes* rather large, subequal; occupying the whole width of the caput. The fore-central pair the largest, a diameter apart, forming a longer line than the hind-centrals, and seated obliquely on the outer sides of a large transverse oval prominence; when looked at from above and slightly behind they are almost in contact with the fore-laterals, forming with them a large semicircle. Each lateral pair is on a tubercle and placed in a line almost parallel to the thoracic margin. The hind-centrals are slightly less than an eye's diameter apart, and a little more than an eye's diameter from the hind-lateral eye on its side, and (looked at from above) form with them a curved line whose convex side is directed forwards.

*Legs* moderately strong and long, 1, 2, 4, 3, furnished with long, strong, coarse bristly hairs; a stronger erect bristle on the genuæ, and one or more similar bristles on the tibiæ.

*Palpi* short.

*Maxillæ* short, strong, straight, inclined towards the labium, and somewhat obliquely and roundly truncated on the outer side at their extremity.

*Labium* short, slightly pointed at the apex.

*Sternum* broad, heart-shaped, not very convex.

*Abdomen* subtriangular (broad and rounded in front, pointed behind), with one posterior and two anterior prominences on the upperside. The openings to the usual spiracular organs are in a very abnormal position, being near together in a transverse line about the middle of the underside of the abdomen, and furnish one of the strongest characters of the genus. Spinners short, two-jointed, nearly equal in length.

### **Mesopneustes nigrovittata,** sp. n.

*Adult male*, length $\frac{1}{13}$ inch.

The whole of the fore part is yellow. The *cephalothorax* with a broad, distinctly marked, black, central longitudinal band just including the ocular area, but a little widest on the hinder slope.

The *palpi* are short. The cubital joint somewhat nodiform, the radial considerably produced on the outer side, and nearly half the length of the digital joint, to which the apophysis adheres closely. The digital joint is of an elongated-oblong form, truncate at the fore extremity, and its convex sides are directed towards each other. The palpal organs are simple, with a small, tapering, twisted, prominent spine at their extremity.

The *abdomen* is moderate in size and convexity, of a triangular form, rounded in front, with a small rounded prominence at each shoulder, and another at the hinder extremity a little way above the spinners; its

colour is jet-black, with a transverse whitish line on the middle of the underside, indicating the unusual position of the ordinary spiracular openings. It is furnished with numerous long, strong, bristly hairs.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## ITYS, gen. nov. (Theridiidæ).

*Cephalothorax* oval, broad and bluff in front; the lateral constrictions at the caput very slight; caput and thorax (in profile) on one level, the hinder slope very gradual, the profile line of the caput running on a slight slope to the fore-central eyes; the normal lateral indentations between the caput and thorax broad and shallow; the height of the clypeus equal to half that of the facial space.

*Eyes* small, subequal, occupying the whole width of the anterior portion of the caput; looked at from in front the anterior or lower row is straight, the posterior longest and much curved. The intervals between those of the posterior row are equal. Those of the fore-central pair smallest, dark-coloured (the rest being pearly white), and near together, but not quite contiguous, with perhaps half a diameter's interval between them. Those of each lateral pair contiguous to each other, and obliquely placed on a slight tubercle.

*Legs* moderately long, slender, 1, 4, 2, 3, furnished with hairs, and a single slender spine on each of the genual and tibial joints.

*Falces* small, straight, and considerably inclined towards the maxillæ.

*Maxillæ* strong, especially at the base, not very long, inclined to the *labium*, which is short, small, and somewhat semicircular in form.

*Sternum* broad, heart-shaped, and rather prolonged at its hinder extremity into an obtuse point between the coxæ of the fourth pair of legs.

*Abdomen* oval, subcylindric in form.

This genus belongs to the subfamily *Erigonini*, Sim., but it cannot be considered equivalent to any of the numerous genera into which the European species of that subfamily are now subdivided.

### **Itys pergrata,** sp. n.

*Adult male*, length 1 line.

*Cephalothorax* dull orange-coloured, a little suffused on the sides with brownish. The ocular area, and also a small space behind it, is furnished with prominent coarse hairs.

The *eyes* are on black spots; the four centrals form a trapezoid, whose length and breadth behind are equal, but its anterior side is much shorter. The clypeus is nearly vertical.

The *legs* are bright yellow.

The *palpi* are short, similar to the legs in colour. The cubital joint is small and short, the radial joint is scarcely longer but much stronger, and has an angular prominence at its fore extremity a little on the outer side. The digital joint is large. The palpal organs are highly developed, prominent, complex, with a semicircular or crescent-shaped process at their base on the outer side, and a long, strong, duplex, coiled, sharp-pointed spine, which issues from their outer side, passes over the middle, and encircling their extremity ends in a strongly sinuous coil.

The *falces*, *maxillæ*, *labium*, and *sternum* are similar in colour to the cephalothorax.

The *abdomen* is of a pale drab-yellow colour, with a black longitudinal central stripe on the fore-half of the upperside, with a small prominent point on each side near the middle and at the posterior extremity, followed by two (perhaps in some examples more) angular black bars or chevrons, whose angles and ends are dilated into blotches; on each side of the anterior part there is also a short longitudinal black bar or stripe. The spinners are small, compact, those of the inferior pair longest and strongest, and encircled at the base with a black bar.

*Hab.* GUATEMALA. Coban (*Sarg*).

This spider bears some resemblance to the genus *Tapinocyba*, Sim., and the late

Count Keyserling describes one from North America which seems also to have some affinity to it (*Erigone infernalis*, Keys., 'Spinnen Amerikas,' Theridiidæ, 1884, p. 180, t. 17. fig. 239).

ERIGONE, Audouin.

**Erigone dentosa,** sp. n.

*Adult male*, length rather more than 1 line.

*Cephalothorax* oval, glossy bright red-brown, rather depressed behind, considerably and rather abruptly elevated at the caput, the occiput being well rounded. Clypeus strongly porrected, convex, and considerably exceeding half the facial space in height. The margin of the cephalothorax is armed with prominent denticulations, some of which are much stronger than the rest.

*Eyes* normal in position. The four centrals form a trapezoid whose length is greater than its breadth, and its fore side rather less in length than the posterior side. The interval between the eyes of the hind-central pair is less than that between each and the hind-lateral eye next to it, and the interval between the fore-laterals is equal to a diameter.

*Legs* moderate in length and strength, 4, 1, 2, 3, not greatly unequal—of an orange-yellow colour, the femora of the first two pairs tinged with reddish; they are furnished with fine hairs, and along the hinder side of the femora of the first pair, rather inside, is a longitudinal row of small denticulations, decreasing gradually and regularly in size from the lower towards the upper end of the joint.

*Palpi* long, orange-red-brown, rather slender. The humeral joint is bent into a rather **S**-shape, the front of its lower half (or rather more) armed with strong prominent denticulations, with a longitudinal row along its inner side decreasing in strength from base to tip, and a stronger one at its upper extremity. The cubital joint is long, rather clavate at its fore end, beneath which is the usual pointed spur, about one-third of the joint in length and perpendicular to the joint; also at the middle of the underside is a prominence surmounted by a greatly curved or hooked denticulation pointed inwards. The radial joint is less in length than the cubital, clavate, with a strong prominent denticulation underneath near its fore end, and somewhat pointed at the extremity on the upperside. The digital joint is rather small. The palpal organs are complex and rather prominent.

*Falces* bright red-brown, straight, powerful, directed backwards, prominent in front, where, rather towards the outer side, they are armed with some strong denticulations in a longitudinal row.

*Maxillæ*, *labium*, and *sternum* normal in form, and similar in colour to the falces.

*Abdomen* oval, glossy, black, and thinly clothed with fine hairs.

*Hab.* GUATEMALA, Antigua (*Sarg*).

This spider is closely allied to several of the common European forms, but differs from all known to me in the hooked denticulation beneath the cubital joint of the palpi.

ARGYRODES, Simon.

**Argyrodes argenteola,** sp. n.

*Adult male*, length not quite 1 line.

This very pretty and distinct species is normal in its general form and appearance.

The *cephalothorax* is deep brown, approaching black; the clypeus exceeds in height half that of the facial space, and has the middle of its lower margin somewhat produced and pointed, the point projecting downwards over the base of the falces.

The *eyes* of the hind-central pair are further from each other than each is from the hind-lateral eye on its side.

The *legs* are moderate in length and strength, 1, 2, 4, 3, those of the first pair much the longest; furnished with short, fine hairs only; those of the first and second pairs are yellow-brown, the femora darker

(excepting at their posterior extremities), the tibiæ with a small pale annulus at their hinder extremity. The third and fourth pairs are much paler, excepting the genuæ and the fore ends of the tibiæ.

The *falces* are dark yellow-brown, tolerably long and strong, straight, a little prominent at their base in front, porrected, and their extremities meeting those of the maxillæ, which with the labium and sternum are of normal form and similar in colour to the falces.

The *palpi* are short, pale yellow-brown; the digital joint large, oval, deep brown; the palpal organs very simple, consisting apparently of a single large, oval, convex lobe.

The *abdomen* is of moderate size, very convex above, broadest and highest at its hinder part, which has a small subconical prominence on each side, and its centre drawn out backwards into a short obtuse caudal prominence; viewed sideways the profile of the abdomen forms a pretty regular curve with a hollow line from the extremity to the spinners, about equal in length to the distance from them to the fore end of the abdomen. The colour is black, the upperside ornamented with a bold pattern of silvery lines and patches easier to depict than describe, but having a large somewhat quadrate black area at the fore extremity; on each side of the extremity of the caudal prominence is a distinct silvery spot, and also two others in a transverse line halfway between the caudal prominence and the spinners, and a straight silvery nearly vertical or slightly oblique stripe from the lateral subconical prominence on each side.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## ARIAMNES, Thorell.

### **Ariamnes furcata,** sp. n.

*Adult female*, length very slightly over 1 line; length of abdomen to the spinners $\frac{2}{3}$ of a line; height of abdomen $1\frac{3}{4}$ of a line.

*Cephalothorax* pale and yellowish, with a central-longitudinal, marginal, and converging-lateral dusky brownish lines. The height of the clypeus, which is convex and prominent, exceeds half that of the facial space, and is suffused with dusky brown.

*Eyes* rather small, and most of them nearly equal in size, forming a transverse oval, or in two curved lines, of which the anterior is shortest but most strongly curved, the convexity of the curves being directed away from each other; the four central eyes form a largish square, and each lateral pair is placed obliquely and rather near to it; the anterior eye of each lateral pair is much smaller than the others.

*Legs* moderately long, 1, 2, 4, 3, slender, furnished with short fine hairs only; colour pale dull yellowish.

*Falces* rather short, straight, not very strong, rather porrected.

*Maxillæ* normal, their extremities level with the extremities of the falces, and almost meeting over the labium.

*Labium* short, rather broad, somewhat rounded at the apex.

*Sternum* rather elongate-subtriangular, and, like the falces, maxillæ, and labium, similar to the legs in colour.

*Abdomen* of a pale luteous colour, thickly covered with silvery-white spots, except on the dorsal vessel, the latter showing as an elongate marking pointed at its hinder extremity, which goes off into a fine line, and has a short oblique line emanating from it on each side where it begins to taper. The upperside of the abdomen is greatly elevated into an erect tapering eminence two and a half times as high as the length of the abdomen, the upper part of which curves a little backwards, and its blunt extremity is divided into two small conical divergent processes, directed laterally from each other, and presenting a kind of fish-tail or furcate termination. Genital aperture small but of characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

### **Ariamnes gracillima,** sp. n.

*Adult female*, length nearly 10 lines; length of cephalothorax 1 line; length to spinners slightly over 2 lines.

*Cephalothorax* narrow-oval, flattened; the whole spider, as preserved in spirit of wine, is of a dull yellow hue, but from a rough sketch in colours made by Mr. Champion at the time of its capture, the cephalothorax

and legs are of a greenish colour and the abdomen greenish yellow-brown. The height of the clypeus is less than half that of the facial space.

*Eyes* in the normal position. The four centrals are much the largest and form a trapezoid or square, whose anterior side is rather longer than the rest. Those of each lateral pair are very minute, contiguous to each other, and placed nearly vertically, the upper eye being almost or quite contiguous to the hind-central on its side.

*Legs* very long, 1, 4, 2, 3, slender, furnished with fine hairs only; in Mr. Champion's sketch the fore extremity of the tibiæ of the first pair is suffused with brown, the rest being pale greenish yellow. The length of the first pair exceeds that of the spider itself.

The *palpi* are short, slender, and similar to the legs in colour and armature.

*Maxillæ*, *labium*, and *sternum* of normal form, and similar in colour to the legs.

*Abdomen* excessively prolonged into a slender, tapering, cylindrical, sharp-pointed tail, eight or nine times the length of the cephalothorax; its colour, in life, is pale greenish yellow-brown, thickly covered with minute yellowish-silvery spots, and clothed with fine hairs, which are stronger and denser towards the posterior extremity. The genital aperture is of characteristic form.

*Hab.* PANAMA, Los Remedios in Chiriqui (*Champion*).

### **Ariamnes approximata,** sp. n.

*Adult female*, length rather over 11 lines; length of cephalothorax and abdomen to spinners 2 lines; length from spinners to hinder extremity of abdomen rather over 9 lines.

*Hab.* PANAMA, Bugaba in Chiriqui (*Champion*).

This species is very nearly allied to *A. gracillima*, and resembles it closely in general appearance and colours, but differs in having the abdomen to the spinners longer in proportion to the length of the cephalothorax. The legs are much shorter, the longest not reaching nearly to the end of the abdomen, and they are of a yellow-brown colour (in the preserved specimen); the metatarsi of the first and fourth pairs are no more than three times the length of the tarsi, while in *A. gracillima* they are nearly, if not quite, four times the length of the tarsi. The abdomen is also less clothed with hairs (though this may be owing to the hairs having been rubbed off), and its hinder extremity is shorter-pointed. There is also some little difference in the form of the genital aperture.

## ACHÆA, Cambridge.

### **Achæa vittata,** sp. n.

*Adult female*, length 3 lines.

This spider is of normal form and general structure.

The *cephalothorax* is pale yellow, slightly clouded with dusky on the sides, and with an oblique dusky brownish line on each side running from the lateral pairs of eyes backwards obliquely to a darker marking at the thoracic indentation.

The *eyes* are normal; four form a central square, and on each side is a lateral pair placed slightly obliquely; the interval between each of the fore-central pair and the fore-lateral eye next to it is only half that between the fore-centrals; the interval between the hind-centrals is rather less than a diameter, and is also less than that between each and the hind-lateral eye next to it. The height of the clypeus exceeds half that of the facial space.

The *legs* are long, 1, 4, 2, 3, rather slender, pale yellow, the fore extremities of all the tibiæ and metatarsi, and of the tarsi of the first pair, more or less strongly tinged with yellowish brown. They are furnished with coarse hairs, rather more densely on the brown extremities of the tibiæ.

*Falces* straight, neither very long nor strong, and, with the *maxillæ* and *labium* (which are of normal form), pale yellow.

*Sternum* subtriangular, brownish-black.

*Abdomen* rather elongate, very convex above, the hinder part gradually raised to a subconical termination, with a vertical slope, rather forwards, to the spinners. The upper part, sides, and hinder slope are white, with a broad, longitudinal, central brown band on the upperside to the conical point, the sides being marked more or less distinctly with a strong inverted vandyke pattern of a yellow-brownish colour, having a straight, vertical, white stripe down the middle of the hinder slope to the spinners; these last are short, compact, and surrounded by a circlet (deficient in front) of largish round white spots. The underside is of a dusky drab colour, with a black patch immediately in front of the spinners, and a large transverse oblong-oval figure, open behind, formed by a black marginal line, between the spinners and the genital aperture, which is very small, but simple, and of characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## EURYOPIS, Menge.

### **Euryopis lineatipes,** Cambr.

Since the description of the female was printed (*anteà*, p. 108), I have found the male among Mr. Champion's Bugaba (Chiriqui) collection. This sex resembles the female in size, colours, and markings, but the latter are more vivid and distinct. The palpi are short, pale yellow; the digital joint is large, dark yellow-brown; the palpal organs are prominent and compact, but complex, with characteristic spines and processes.

*Hab.* PANAMA, Bugaba in Chiriqui (*Champion*).

## THERIDION, Walckenaer.

### **Theridion purum,** sp. n.

*Adult female*, length to extremity of abdomen $1\frac{1}{2}$ lines, to spinners 1 line; height of abdomen from spinners $1\frac{1}{4}$ lines.

The *cephalothorax* is of normal form and pale yellowish-brown in colour, the ordinary indentations and a central line from the eyes to the occiput of a darker brown. The clypeus retreats immediately below the eyes, and its lower margin is prominent; its height is a little greater than half the facial space.

The *eyes* are of tolerable size, subequal, and closely grouped together. They are in two transverse, about equally curved, lines, the convexity of the curves directed away from each other. The four centrals form a square, the anterior pair seated on a strongish tubercular prominence of the ocular area. The interval between the hind-centrals is scarcely an eye's diameter, and very slightly greater than that between each and the hind-lateral eye next to it. The fore-central pair are dark coloured, the rest pearly-white.

The *legs* are short, moderately strong, 1, 2, 4, 3, of a pale yellowish colour, slightly tinged with brown at the anterior extremities of the joints, most strongly on those of the tibiæ and metatarsi of the fourth pair. They are furnished with coarse hairs, and a slender spine on the genual and one or two spines on the tibial joints.

The *palpi* are short, yellow-brown, the digital joint more than double the length of the radial.

The *falces*, *maxillæ*, and *labium* are normal in form, and of a yellow-brown colour.

The *sternum* is rather elongate, subtriangular, strongly convex, and yellow-brown in colour.

The *abdomen* is large, much elevated on the upperside, its height being more than double its length, and ending in a small somewhat subconical prominence. It is of a pale dull yellow-brown hue, closely mottled with whitish. The conical prominence is black in front and pale behind, and a little way in front of it, on each side, is a narrow but very distinct rather oblique zigzag black line, bordered behind with a white line. A faint brown line runs upwards, on each side of the spinners, on the hinder perpendicular slope. The genital aperture is small, inconspicuous, but of characteristic form.

*Hab.* MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Mr. Smith has the following note on this spider:—"Found in a hollow at the root of a tree in a shady ravine, in a small den like an inverted cone, formed of bits of dried leaves, &c., and supported in a small irregular web."

PHYLLONETHIS, Thorell.

**Phyllonethis thorellii,** sp. n.

*Adult male*, length 1½ lines.

*Cephalothorax* bright yellow; a straight blackish stripe divides the thoracic region longitudinally, and subdividing at the thoracic indentation a branch runs to just behind each lateral pair of eyes, forming a distinctly marked fork, and with a more or less strongly marked curved transverse blackish line immediately behind the ocular area. The height of the clypeus is equal to half that of the facial space.

The *eyes* are small, subequal, seated on black spots; the eyes of each lateral pair are on a slight tubercular prominence, and contiguous to each other. The four centrals form a square; the hind-central pair are rather nearer to each other than each is to the hind-lateral eye on its side.

The *legs* are long, 1, 2, 4, 3, slender, bright yellow, well furnished with long coarse bristly hairs; the genuæ with one and the tibiæ with two black slender spines or spine-like bristles.

The *palpi* are short, similar in colour to the legs, furnished with coarse bristly hairs, a single row running round the anterior margin on the upperside of the radial joint, which has that part (like its congeners) considerably produced. The digital joints are rather large, oval, their convex sides directed towards each other. The palpal organs are well developed, compact, much marked on the surface of one portion with reddish sinuous lines, and with, among others, a corneous process, near their fore extremity, whose termination is bifid and black.

The *falces* are straight, moderate in length and strength, and similar in colour to the cephalothorax.

The *maxillæ*, *labium*, and *sternum* are normal in form, and similar in colour to the legs.

The *abdomen* is of moderate size, oval; the ground-colour is a pale dull drab. Along the middle of the upperside is a strong white dentated band, broadest near the middle, and a marginal row on each side of five black spots, the two rows converging to the spinners, just above which the last two are situated. The sides of the abdomen are also white. The spinners are short and compact.

*Hab.* MEXICO, Omilteme in Guerrero 8000 to 9000 feet (*H. H. Smith*).

This species is nearly allied to, but quite distinct from, the European *P. lineata* (Linn.), differing in the markings of the cephalothorax and abdomen, as well as in other important points.

Since the above description was written, I have come across the female among the spiders collected in Guatemala by Mr. Sarg. This sex resembles the male in colours and markings, and the genital aperture is of characteristic form.

EPISINUS, Walckenaer.

**Episinus putus,** sp. n.

*Adult male*, length 2 lines.

*Cephalothorax* a little longer than broad, oval, obtusely pointed before, without, or with scarcely any, lateral marginal indentation, broadly truncated behind, flattened above, and with a dip or indentation (in the profile line) immediately behind the ocular area. Colour pale brownish-yellow, with a narrow central longitudinal tapering blackish-brown stripe, and an indistinct irregular lateral band, as well as a suffused marginal one, of a dusky brown, on each side.

*Eyes* of tolerable size, subequal, placed rather closely together. The interval between those of the hind-central pair is equal to a diameter, and each is about half or less than that from the hind-lateral eye on its side;

the eyes of each lateral pair are contiguous to each other; those of the fore-central pair, which are on a strong prominence, form a longer line than the hind-centrals, and each is very close but not quite contiguous (about half a diameter) to the fore-lateral eye on its side, the fore-centrals and the lateral eyes forming a semicircle. The height of the clypeus, which is strongly impressed below the eyes, is less than half that of the facial space.

*Legs* very long, 1, 4, 2, 3, slender, rather paler than the cephalothorax, furnished with hairs and a few fine spine-like bristles on the genuæ and tibiæ.

*Falces* rather long, weak, straight, and similar in colour to the legs.

*Palpi* long, cubital and radial joints equal (or the latter, perhaps, slightly shortest), and a little clavate at their fore extremities; digital joints less in length than the radial, narrow-oval or oblong, their convex sides directed towards each other, and of a yellow-brown colour, the rest of the palpus being similar in colour to the legs. Palpal organs compact but rather complex.

*Maxillæ, labium*, and *sternum* similar to the legs in colour, the *sternum* having a broad rather suffused dusky-blackish marginal border.

*Abdomen* very narrow-oval or oblong, pointed behind, somewhat cylindrical in form, of a pale dull brownish-yellow hue, marked above and on the sides with blackish marks, from which it is difficult to describe any very distinct pattern; the most regular are a series of several short diminishing transverse lines of black just above the spinners, crossed by a median longitudinal line. The underside forms a broad dusky brownish longitudinal band.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

This spider is nearly allied to, but appears to be quite distinct from, *Episinus cognatus* (*anteà*, p. 109).

## MIMETUS, Hentz.

### **Mimetus bigibbosus**, sp. n.

*Adult male*, length $1\frac{1}{2}$ lines.

The *cephalothorax*, legs, palpi, and sternum are pale yellow, the falces tinged with yellow-brown; the maxillæ and labium dark brown towards their base. The ocular area, which is rather prominent, is tinged with yellow-brown, and there are some small markings of a similar colour on the occiput, as well as a largish somewhat quadrate patch of the same at the thoracic junction; the cephalothorax has also a narrow dusky marginal border. The legs are faintly but not very regularly annulated with yellow-brown.

The *eyes* are unequal, those of the fore-central pair much the largest, near together, but not contiguous. The four central eyes form an oblong narrow trapezoid, and are placed on a strong somewhat tubercular prominence. The lateral pairs are at a little distance on either side; their eyes are small, contiguous to each other and seated on a prominence of less size than those of the fore-centrals. The hind-centrals are almost contiguous to each other. The height of the clypeus is equal to nearly half that of the facial space.

The *legs* are long, rather slender, 1, 2, 4, 3; 1 and 2 much the longest and strongest. They are furnished with hairs, bristles, and spines, some of the latter, especially on the tibiæ and metatarsi, very long; between the long spines on the inner side of the metatarsi are others much shorter, and graduating in length between each two of the long ones, but becoming shorter towards the posterior end of the joint.

The *palpi* are moderately long and slender. The cubital joint is very short, nodiform or prominent in front, where there are two very long curved spine-like tapering bristles directed forwards; the radial joint is rather long, strongly clavate at its anterior extremity, and furnished towards the anterior extremity with some longish bristles of different lengths. The digital joints are rather small, short-oval, their convex sides directed to each other, and furnished with long bristly hairs. The palpal organs are prominent, complex, with several curved corneous processes and spines connected with them.

The *falces* are moderately long, not very strong, straight.

The *maxillæ* are of moderate length, straight, a little inclined to the labium, and rather pointed at their extremity on the outer side.

The *labium* is a little more than half the length of the maxillæ, and somewhat obtusely pointed at the apex.

The *sternum* is oval, truncated at the fore end.

The *abdomen* is moderately large, of a somewhat triangular form, with a strong obtusely pointed subconical eminence at each of the fore corners. Its colour is dull luteous, spotted irregularly with white; between each of the eminences and the spinners is a distinct black spot, and there are several others, smaller and round, just above the spinners. Probably some variety would be found in a series of examples in respect to the abdominal pattern or markings.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## EPEIROTYPUS, gen. nov. (Theridiidæ).

*Cephalothorax* distinctly longer than broad; lateral marginal indentation strong, and the margins furrowed or impressed. Caput drawn out forwards, and the indentations dividing it from the thorax strong. Clypeus low, not exceeding in height the diameter of one of the fore-central eyes.

*Eyes* large, subequal, occupying the whole width of the fore part of the caput. The hind-centrals form a line rather longer than the fore-centrals; they are separated from each other by more than a diameter's interval, and from the hind-lateral eye on its side by half that space or less. The eyes of the lateral pairs are nearly but not quite contiguous, and each of the fore-laterals is nearer to the fore-central next to it than the fore-centrals are to each other.

*Legs* short, strong, tapering, subequal, 1, 2, 4, 3, furnished with longish hairs and bristles, a few of the latter being longer and of a spine-like character.

*Falces* straight, moderate in length and strength.

*Maxillæ* short, broad, and rather roundly truncate at the apex.

*Labium* small and somewhat semicircular, a little less than half the length of the maxillæ.

*Sternum* subtriangular; the posterior extremity obtuse and somewhat drawn out, the anterior hollow-truncate.

*Abdomen* large, broadest at the posterior extremity, rounded before, squarely truncate behind, considerably elevated but rather flattened on the upperside, and projecting a good deal over the thorax. The genital aperture is situated much nearer the middle of the underside of the abdomen than usual, and the spiracular openings are also further back than usual. Spinners short, compact, and with the transverse lip of a spiracular opening close in front of them.

### Epeirotypus brevipes, sp. n.

*Adult female*, length 1½ lines.

*Cephalothorax* deep yellowish-brown and glossy, with a yellowish marginal line, and a short strong, curved, yellow bar on each side of the thoracic indentation, the convexity of the curves directed away from each other. The thorax has also several short converging blackish lines on each side.

The four central *eyes* form a square, whose anterior side is shorter than the others; those of the posterior row form very nearly a straight transverse line; the anterior row greatly curved.

*Legs* yellow, rather irregularly annulated with blackish and yellow-brown; femora of unusual strength.

*Palpi* short, similar to the legs in colour and armature.

*Falces* yellow-brown, marked near their base in front with dusky brown.

*Maxillæ* and *labium* yellow, suffused with brown at their base.

*Sternum* dusky brown in the middle, with a broad yellow margin.

*Abdomen* broad, rather quadrate behind, obtusely rounded in front; the upperside flattened, convex, white, or dull-coloured, and closely spotted with white, with a small blackish central spot; at the hinder extremity on either side it is somewhat subangularly prominent. The sides and underside are black-brown, obscurely mottled with whitish; the upper margin of the black-brown parts is somewhat denticularly irregular, but well-defined above the spinners; the hinder slope, which is vertical, is marked with alternate transverse, short, straight, yellowish and black-brown bars. The genital aperture is very simple, but characteristic, and is placed immediately behind a large convexity (which reaches to the fore end of the abdomen), being thus nearer to the spinners than to the fore end. The normal spiracular openings are on each side of the genital aperture as usual, but are still much further back than is commonly the case. On either side just behind the genital aperture are two small, bright, whitish-yellow spots in a transverse line.

*Hab.* GUATEMALA, Senahu (*Sarg*).

This spider, which is allied to both *Theridiosoma*, Cambr., and *Ogulnius*, Cambr., is even nearer to the true Epeirids than the former of these two; it also comes near the genus *Mesopneustes*, Cambr. (*anteà*, p. 126).

## ARGYROEPEIRA, Emerton.

### **Argyroepeira mesomelas,** sp. n.

*Adult female*, length $2\frac{1}{4}$ lines.

The general form and structure of this spider is normal.

The *cephalothorax* is dark brown, as are also the *falces*, *maxillæ*, *labium*, and *sternum*.

*Eyes* normal; the four centrals form a square, the two anteriors, as well as the lateral pairs, seated on small tubercular prominences.

The *legs* are slender, not very long, 1, 4, 2, 3, 4 and 2 being nearly equal; their colour is yellowish-brown, the tibiæ paler, the anterior extremities of the femora, genuæ, and tibiæ dark brown; they are furnished with short fine hairs, but are entirely destitute of spines.

The *abdomen* is large, subcylindrical, greatly produced forwards, and projecting almost entirely over the cephalothorax (viewed in profile, there is nearly as much of the abdomen in advance of the pedicle as behind it). Its colour is a shining jet-black, marked on the sides with two or three silvery dashes or markings, the anterior one, near the fore extremity, being curved and directed to the upperside, towards the hinder part of which are one or two oblique silvery stripes on each side, with a central longitudinal one at the hinder extremity. Spinners dark brown. Genital aperture small but characteristic in form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## META, Keyserling.

### **Meta flava,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines.

The whole of the fore part of this spider is yellow; the femora of the first pair of legs tinged on the posterior half with yellow-brown, and a small portion at the anterior extremity of the tibiæ of the 1st, 2nd, and 3rd pairs of legs more or less dark yellow-brown. The cephalothorax also has the thoracic and cephalic indentations, and two longitudinal parallel lines from the hind-central pair of eyes, dusky yellow-brown.

The *cephalothorax* and other parts are of normal form.

The *eyes* are on black spots, subequal, and in the usual general position. The posterior row is nearly straight, the anterior row much curved, the convexity of the curve directed forwards. The interval between the eyes of the hind-central pair is rather less than a diameter, and less than that between each and the hind-lateral eye next to it. The four central eyes form an oblong trapezoid, whose anterior side is longer than the posterior. The height of the clypeus is nearly equal to the diameter of one of the fore-central eyes.

The *legs* are moderately strong, 1, 2, 4, 3, the first two pairs long, the first longest, the third and fourth pairs much the shortest. They are furnished thinly with moderately strong black spines, and rather densely with short, fine, erect, pale hairs.

The *palpi* are short and slender. The digital joint and palpal bulb are large. The palpal organs are highly developed, prominent, and complex, and have a strong prominent irregular corneous process at their base, almost in contact with another strong prominence at the posterior extremity of the digital joint; this latter prominence has a rather irregular termination; at the extremity of the palpal organs is a strong, coiled dark spine, with a small one within its coil.

The *abdomen* is oval, of a uniform luteous-yellowish hue, clothed with fine erect pale hairs, and covered thinly with small, roundish, silvery-white and yellowish spots, leaving, however, the form of the dorsal vessel clear, the latter tapering backwards, of a deeper duller colour, and emitting some short lateral lines from its posterior half.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## SINGA, Koch.

### **Singa flava,** sp. n.

*Adult male*, length $1\frac{1}{3}$ lines.

The whole of the fore part of this spider is of a bright orange-yellow colour, excepting the tibiæ, metatarsi, and tarsi of the third and fourth pairs of legs, which are brownish-black, and the digital joints of the palpi, which are dark yellowish-brown.

*Cephalothorax* of normal form.

*Eyes* in the usual position, on tubercular prominences and strong black spots. The four centrals form nearly a square, whose anterior side, however, is distinctly longer than the posterior. The interval between the hind-central pair is less than a diameter; the tubercles on which the fore-central pair are seated are stronger and more prominent than the rest. The hind-centrals are slightly larger than the other eyes. The clypeus is hollow and retreating, and its height is about half that of the facial space.

The *legs* are rather long, moderately strong; the spines not numerous, nor strong, but some (on the tibiæ of the first pair) rather long; colour as mentioned above.

The *palpi* are short. The cubital joints very short, somewhat nodiform, or subconical, with two long, strong, curved, tapering black spine-like bristles of equal length issuing from the middle of the anterior side; digital joint and palpal bulb large. Palpal organs highly developed, prominent, and rather complex, with spines and corneous processes.

*Abdomen* oval, of a dull luteous or clay-yellow colour, slightly tinged with rusty red at the hinder part, and with a short, slightly curved, longitudinal white dash or stripe on each side of the anterior extremity.

*Hab.* Mexico, Tierra Colorada, on the road from Chilpancingo to Acapulco, altitude 2000 feet (*H. H. Smith*).

## TURCKHEIMIA, Cambridge.

### **Turckheimia diversa,** sp. n.

*Adult female*, length 3 lines (to extremity of the posterior abdominal prominences), length of cephalothorax $1\frac{1}{3}$ lines.

*Cephalothorax* oval, moderately constricted laterally at the caput; occiput and thorax very gibbous, chiefly owing to the depth of the normal indentations. It is of a dull yellowish-brown colour, covered with greyish pubescence.

*Eyes* small, in normal position; those of the central group form a small trapezoid whose posterior side is shorter than the others, and the two eyes of which it is composed are very nearly contiguous to each other. The lateral pairs are smallest, seated on a tubercle and near together, but not contiguous to each other. The clypeus is very low, its height being less than the diameter of one of the fore-central eyes.

*Legs* short, 1, 4, 2, 3, rather strong, furnished with hairs and small short spines; the tibiæ are rather bent, and enlarge at their anterior extremities. Their colour is yellow, distinctly, though not quite symmetrically, annulated with dark black-brown.

*Falces* moderate in length and strength, vertical, and prominent in front.

*Maxillæ* short, broad, much inclined towards the labium, dark brown, with pale extremities.

*Labium* very short, of a somewhat subtriangular form, dark brown, with pale apex.

*Sternum* heart-shaped, mottled with brown, yellowish-white.

*Abdomen* large, oval, slightly pointed in front; the hinder extremity projecting greatly beyond the spinners; the length from the fore extremity on the underside to the spinners being less than that from the latter to the hinder extremity. Rather in advance of the middle of the upperside, in a transverse line, one on each side, are two rather strong, bluntly subconical eminences; at the hinder extremity are three other eminences in a transverse line, the middle one subconical like the two anterior ones, the lateral ones nearly round and stronger than the middle one, and a little way in front of this last is another much smaller and subconical eminence. These eminences, as well as the rest of the surface, are covered thickly with short grey-yellowish and brownish hairs. The general colour is dull yellowish-brown, marked pretty symmetrically with black spots and markings, which are edged with somewhat angular or dentated

lines of white hairs; the best-defined of the black markings are four large ones near the middle of the upperside, forming nearly a square between the single small posterior and the two anterior eminences. The underside is blackish, with a black rather raised spot edged posteriorly with white hairs on each side a little behind the genital process; this last is of moderate size, prominent, and has a small epigyne connected with it directed downwards and backwards.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## AMAMRA, Cambridge.

### Amamra gibbifera, sp. n.

*Adult female*, length 1½ lines.

*Cephalothorax* yellow-brown, dark brown in front and on the sides, and clothed with short hairs; elevation of the anterior portion of the caput strong, the sides of the occiput rather gibbous.

*Eyes* in normal position. The four central eyes are on the front face of the elevation, forming a trapezoid broader behind than long; the upper pair are on strong tubercular prominences, wide apart, and much the largest of the eight. The lateral pairs are widely removed from the central four, and placed near the lower margin of the caput nearly in a straight transverse line with the two fore-central eyes. The height of the clypeus is half that of the facial space.

The *falces* are strong, straight, subconical, a little directed backwards, and similar in colour to the cephalothorax.

*Legs* short, strong, 1, 2, 4, 3, pale yellow in colour, the anterior portion of the femora dark blackish-brown; they are furnished with hairs and a few inconspicuous spines, and the terminal claws spring from a small claw-joint.

The *maxillæ*, *labium*, and *sternum* are yellow-brown.

The *abdomen* is large and much elevated; on each side of the anterior part above is a strong subconical rather divergent prominence, and behind them in the median line is a large roundish hump. The colour of the abdomen is yellow-brown, mixed with darker and lighter patches and markings, but not apparently forming any very definite or describable pattern; underside blackish. The spinners are short and compact, and the genital aperture is inconspicuous but characteristic in form.

*Hab.* MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

## MIAGRAMMOPES, Cambridge.

### Miagrammopes lineatus, sp. n.

*Female* (*immature*), length 1½ lines.

*Cephalothorax* of normal form, double as long as broad, broadest in front, where it is rounded. Colour dark brown, with two subparallel longitudinal pale yellow lines passing between the two middle eyes, and leaving a long dark brown stripe between them, broadest in the middle, and finishing off to a point at each end, and a broad marginal pale yellow band.

*Eyes* in the ordinary position, two forming an oblique line on each side, seated on tubercles, the lower tubercle much the largest and round. The interval between the two middle eyes is considerably greater than that between the laterals. The eyes nearest the lateral margin of the caput are the largest.

The *legs* are moderate in length, 1, 4, 2, 3, those of the third pair very short, the first pair strong and porrected, the fourth with a strong calamistrum on the metatarsi. The first three pairs are brown (the first darkest) above, yellow-brownish underneath; the fourth pair pale yellow, the genuæ and extremities of the femora and tibiæ black; tarsi and metatarsi darkish yellow-brown.

*Falces* pale yellowish, with a black spot above near their base towards the outer side.

*Maxillæ*, *labium*, and *sternum* brownish-yellow.

The *abdomen* is elongate-oblong, subcylindrical, dark brown above and on the sides, with two longitudinal parallel pale yellowish lines, leaving a central longitudinal dark brown band. There is also a longitudinal

black dash on each side towards the fore part, and a central longitudinal dark brown tapering stripe on the fore part, the latter defined by a slender pale line on each side and going off into a fine line at its hinder extremity. The underside is pale yellow-brown, with indications of a darker central longitudinal band, and with four black spots in two pairs near the middle.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

I am unable, even with a strong microscopic lens, to discover the additional eyes which M. Simon accredits to this genus in his recent work (Hist. des Araignées, 2nd edition, 1892, p. 217).

## XYSTICUS, C. Koch.

### **Xysticus pellax,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines.

In size, general appearance, and markings this spider closely resembles some varieties of *X. pini*, Hahn, but it may be at once distinguished from that species by the very different form of the palpal processes.

The *cephalothorax* is deep brown, with a broad longitudinal central band, containing the normal spade-marking, pale dull yellowish-brown; this marking runs a little into and spreads each way over the hinder part of the ocular area, and has its sides, as it runs backwards, parallel, and its point at the posterior end rather abrupt; in front of this marking and running transversely through the ocular area is a curved pale whitish stripe or strong line. The cephalothorax is thinly covered with short, erect, spine-like bristles, and the height of the clypeus is about two-thirds that of the facial space.

The *eyes* are normal. The quadrilateral figure formed by the four centrals is a square, excepting the anterior side, which is slightly shorter than the others. The curve formed by the anterior row is rather stronger than in the European forms.

The *legs* are moderate in length and strength; they are of a pale whitish hue; the coxæ and femora closely spotted with minute dark brown points, and striped longitudinally with dark brown. The genual, and a small portion at the posterior extremity of the tibial, joints are dark brown, and the rest of the tibiæ and metatarsi are thinly and minutely speckled with brown, and marked with very fine brown longitudinal lines. The legs are clothed with very short fine hairs and armed with spines.

The *palpi* are short, yellow-brown and whitish in colour. The radial joint is stronger than the cubital, and is furnished with strong bristly hairs; it has a strong obtuse apophysis underneath, and a pointed one at its extremity on the outer side, the point being in contact with a small pointed prominence near the base on the outer side of the digital joint; this last joint is of tolerable size, very short, and of a round-oval form. The palpal organs are simple, surrounded by a marginal, slender, circularly coiled spine and two short, rather strong, curved, sharp-pointed, claw-like spines in the middle, and opposed to each other.

The *maxillæ*, *labium*, and *sternum* are of normal form, of a pale ground-colour, densely covered with minute dark brown points.

The *falces* are small, subconical, vertical, of a pale whitish colour, all except the extremity thickly but minutely spotted with dark brown.

The *abdomen* is short, broadest towards the hinder part, covered with short strong prominent bristles; on its upperside above there is the ordinary Thomisid pattern, dark brown, tinged with yellowish on a whitish ground; along the middle of the upperside is a rather characteristic clear pale whitish longitudinal line or narrow stripe; the sides are rugulose, obliquely lined or striated with black, and the underside is thickly mottled with pale yellow-brown.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## TMARUS, Simon.

### **Tmarus mendax,** sp. n.

*Adult female*, length slightly over 2 lines.

In general form and structure this species is normal.

The *cephalothorax* is brightish yellow-brown, marked with black and white on the sides, and rather paler along the middle. A white line crosses the caput just behind the hind-central eyes, and joins a transverse whitish patch in the middle of the ocular area by a well-defined, central, longitudinal white line; from each end of the patch above mentioned a curved white line runs backwards, the two meeting at the thoracic junction, where there is a small cruciform white marking, and where also two converging lateral, white, more or less broken, lines meet. The cephalothorax is thinly furnished with prominent bristly hairs, springing from minute tubercles. The height of the prominent clypeus, which is pale whitish in the middle, is equal to half that of the facial space; the clypeus is also bounded laterally by a white line.

The *eyes* are small, in the ordinary position, and the laterals are seated on strong tubercles. The four centrals form a trapezoid, whose width behind is greater than its length, and its anterior side is shortest.

The *legs* are neither very long nor strong, 2, 1, 4, 3; they are of a pale dull yellowish colour, marked slightly with white along the upperside. The undersides of the femora of the first and second pairs, and the anterior extremities of the tibiæ, are suffused with brown, and they have a somewhat spotty appearance owing to the dark bases from which the short hairs and a few fine spines spring. The third and fourth pairs are simply pale yellowish, whitish along the upperside, and with a dark marking on the outer sides of the genual joints.

The *falces* are not very long nor strong, subconical, yellow-brown, marked in front with white.

The *palpi*, *maxillæ*, *labium*, and *sternum* are pale yellowish.

The *abdomen* is broader behind than in front, and has a subconical prominence at the hinder extremity of the upperside, whence the slope is nearly vertical to the spinners; it is of a whitish dull chalky hue, a little suffused with a darker colour on the sides of the upper part, leaving an obscurely dentated, central, longitudinal, whitish band along the upperside, furnished with a few bristles which spring from minute deep red-brown tubercles; the hinder slope (extending a little way on either side in front) is white, and on each side of the posterior prominence are two very small subconical prominences in an oblique line directed downwards and a little forwards. The underside has a broad, central, longitudinal, drab-brown band, with lateral diffused stripes of white. The genital aperture is simple but characteristic in form.

*Hab.* Mexico, Venta de Zopilote, 20 miles south of Mescala, Guerrero, alt. 2800 feet (*H. H. Smith*).

## OXYOPEIDON, gen. nov. (Oxyopidæ).

*Cephalothorax* short, oblong, massive, with scarcely perceptible grooves and indentations, hardly longer than broad, its hinder slope very abrupt and steep.

*Eyes* unequal in size, widely spread, occupying the whole width of the caput. They may be described as in two lateral groups of three each in a triangle; and between them, either in a line with the anterior eyes of the triangle (which are the largest of the eight) or a little way in front of them (towards the falces), are two others, near together, very minute, but not contiguous to each other, in a transverse line.

*Legs* short, not very strong, nor differing much in length; the second pair is perhaps the longest, and the third shortest; all the femora, tibiæ, and metatarsi are furnished with long spines.

*Falces* strong, moderately long, subconical.

*Maxillæ* moderately long, straight, a little enlarged in width towards their extremity, where they are very obliquely and rather roundly truncated on the outer side.

*Labium* oblong, more than half the length of the maxillæ.

*Sternum* small, somewhat subtriangular, longer than broad, its posterior extremity drawn out into a long fine point between the coxæ of the fourth pair of legs.

*Abdomen* of moderate size, highest in front, and sloping gradually to the spinners.

This genus is nearly allied to *Oxyopes*, Latr., but whereas the two hind-central eyes in that genus are seldom, if ever, further apart than each is from the hind-lateral eye of the same row on its side, in the present genus they are always so; sometimes more than double the distance, or even nearly three times, thus widening to a great extent the two main groups; the two small anterior eyes are also more nearly in a straight line, sometimes exactly so, with the two eyes nearest them.

### **Oxyopeidon facile,** sp. n.

*Adult female*, length very nearly 4 lines.

*Cephalothorax* dark yellow-brown, clothed in parts (probably in a more perfect specimen entirely so) with white squamose hairs. Clypeus prominent, its height rather exceeding half that of the facial space.

*Eyes* on black diffused spots, the lateral eye on each side (at the apex of each of the lateral triangles) seated on a tubercle; the interval between the hind-central eyes (taking the eyes as in two transverse rows) is nearly three times that between each and the hind-lateral eye next to it. The two minute anterior eyes are, when looked at from in front, in an exact line with the eye on each side of them, and these last are the largest of the eight.

*Legs* and *palpi* yellow-brown, paler than the cephalothorax.

*Falces* similar in colour to the cephalothorax, and clothed with white squamose hairs, especially towards the base. Fang very short, and weak at its extremity.

*Maxillæ, labium*, and *sternum* similar to the legs in colour.

*Abdomen* dark brown on the upperside, clothed with short reddish and grey squamose hairs; along the middle of the fore part is a darker obscure stripe, and there are some black markings above the spinners; the sides have each a kind of obscure broken longitudinal stripe or line of patches and spots of yellow-brown, some of them more or less confluent, and appearing to be clothed with white hairs longer than the rest; these lines of spots end near the spinners. The underside has a broad, longitudinal, central, black-brown band, margined with a brownish-yellow stripe. The spinners are short, compact, and of a dark yellow-brown colour. The genital aperture is of simple but characteristic form.

*Hab.* MEXICO, Chilpancingo in Guerrero (*H. H. Smith*).

### **Oxyopeidon putum,** sp. n.

*Adult female*, length 3 lines; *adult male*, length $2\frac{1}{2}$ lines.

The specimens examined of this species are all in rather bad condition, being more or less denuded of their hairy clothing and pubescence. The general colour is yellow.

The *cephalothorax* is tinged with orange-brown, and (where not rubbed) covered with short grey hairs.

The *falces* are of a similar colour to the cephalothorax; the *legs*, *palpi*, and *sternum* paler yellow, and the *maxillæ* and *labium* tinged strongly with brown.

The *abdomen* is of a dull luteous-yellowish hue, but in some examples with traces of dark reddish-brown markings both above and on the sides. The genital aperture is simple, of a characteristically distinct form.

The *eyes* of the hind-central pair are rather more than double the distance apart that each is from the hind-lateral eye on its side; a line drawn between the two minute anterior eyes and the two large ones near them would touch the upper edge of the former and the lower edge of the latter. The height of the clypeus is equal to half that of the facial space.

The male shows no trace of any dark markings, and it has the eyes placed on large well-defined black patches; the two minute anterior eyes are also placed rather higher up than in the female, so that a line drawn to touch the lower edge of the two large adjacent eyes would run through the small ones, and the interval between the hind-central pair is proportionally rather greater. The falces also are shorter and less strong. The palpi are short; the radial and cubital joints very short, the former with two small apophyses rather underneath on the outer side; the digital joint is of tolerable size and short-oval form; the palpal organs are well-developed and complex, but do not present any very marked processes.

*Hab.* PANAMA, Bugaba (*Champion*).

It is possible that the male here described may prove to belong to a different species.

## Oxyopeidon subfacile, sp. n.

*Adult female*, length rather over 4 lines.

This species is nearly allied to *O. facile*, but may be distinguished by the less width of the interval between the two hind-central eyes; this in the present species equals double the interval between each and the hind-lateral eye next to it. The minute anterior eyes also are distinctly lower down than the line of the two large eyes near them. The clypeus also is less high (not quite equal to half that of the facial space), and much less prominent, being very nearly vertical, and the hinder slope of the thorax is steeper and more abrupt. The general colours are very much like those of *O. facile*, but the femora and the base of the tibiæ are marked with a not very distinct, dark brown annulus; the general hue of the legs is brownish-yellow, that of the cephalothorax and falces yellow-brown, darker than the legs. The abdomen on the sides and upper part is, in front, of a dull luteous-yellow colour, dark brown behind towards the sides, with a central longitudinal dentated stripe of brown on the fore half, followed towards the spinners by a series of dark brown angular lines or chevrons; the underside has a broad, longitudinal, central dark brown band. The abdomen, like that of *O. facile*, appears to have been more or less covered with squamose grey and other hairs, most of which have been rubbed off.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## Oxyopeidon molestum, sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

*Cephalothorax* and *falces* deep brown, thinly clothed with squamose grey hairs. The height of the clypeus, which is a little prominent, is less than half that of the facial space.

The *eyes* of the hind-central pair are separated by an interval double as great as that which divides each from the hind-lateral eye on its side, and the two minute anterior eyes are, when looked at from on a level in front, distinctly below the straight line of the two large ones next to them.

The *legs* are pale yellowish, the femora of the first three pairs two-thirds brown at their anterior extremities, while that part of the femora of the fourth pair is marked with a more decided dark brown annulus, the tibiæ also are dark brown at their anterior extremities.

The *abdomen* is deep blackish-brown, with a pale patch at the fore extremity on the upperside, bearing a short longitudinal black marking, this patch is conspicuous from numerous white hairs; two indistinct reddish round spots or blotches form a transverse line across the middle of the upperside. (The abdomen had evidently been more or less densely clothed with squamose and other hairs, of a grey, reddish, and yellowish colour, but many had been rubbed off.) The underside is nearly black, with a distinct yellowish border, and two nearly parallel longitudinal yellowish lines from the genital aperture, converging towards the hinder extremity. The genital aperture is simple but distinctly characteristic in form.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

Very nearly allied to *O. subfacile*, but smaller, and differs in the colour and markings of the abdomen, as well as in other respects.

## Oxyopeidon flebile, sp. n.

*Adult female*, length 3 to 4 lines; *adult male*, length $2\frac{3}{4}$ lines.

In general appearance and colours this species closely resembles *O. putum*, so that (being also like the types of that species in bad condition) it would not be possible to distinguish them in respect to colours and markings by any detailed description. The eyes, also, are similarly placed. It appears, however, to be

a rather larger spider, and the genital aperture of the female is of a distinct form. The form also of the radial apophysis of the male palpus is different, the palpus itself is rather shorter in proportion, and the digital joint smaller.

*Hab.* PANAMA, Bugaba (*Champion*).

## Oxyopeidon lætum, sp. n.

*Adult female*, length rather over $2\frac{1}{2}$ lines.

The *cephalothorax* is broader in proportion to its length than that of *O. molestum*, and the clypeus is rather prominent below. The cephalothorax is yellow-brown, the ocular area reddish; it is clothed with squamose grey hairs, of which one or more conspicuous lines mark out the ocular area and the limits of the clypeus; the height of the latter appears to be nearly about half that of the facial space.

The *eyes* occupy a wider, as well as a rather flatter, area than in either *O. molestum* or *O. subfacile*; the interval between the two posterior eyes is equal to, even if not exceeding, double that between each and the lateral eye next to it, and the two minute anteriors are almost, when looked at from on a level in front, in a line with the two large eyes near them, so that a line drawn to touch the lower margins of the two large eyes would run very nearly through the centre of the small ones. The absolute, as well as relative, size of these two large eyes appears to be greater than in either of the species above described.

*Falces* similar in colour and clothing to the cephalothorax.

*Legs* yellow, very slightly indeed tinged with brown near the middle of the femora.

*Abdomen* dull brownish-yellow above, with two rather converging longitudinal black lines near the middle, and a distinct black patch on each side a little above the spinners, from which to a little way upwards is a series of short, indistinct, subangular, brownish lines or chevrons; there are also some other indistinct yellow-brown markings near the middle and on the sides. The abdomen is clothed with squamose grey hairs. The underside is dusky brown, and the genital aperture is simple but of characteristic form.

*Hab.* MEXICO, Dos Caminos, on the road from Chilpancingo to Acapulco, alt. 2700 feet (*H. H. Smith*).

In the position of the eyes this species approaches *O. facile*, but it is very much smaller and differs in other respects.

## Oxyopeidon difficile, sp. n.

*Adult female*, length 3 lines.

*Cephalothorax* yellow-brown, clothed with short grey hairs; the sides are marked with a broken marginal line and irregular converging lines of blackish hue.

*Eyes* of hind-central pair nearly double the distance apart that each is from the hind-lateral eye on its side; the line of the two small anterior eyes is distinctly below that drawn between the lower margins of the two large eyes nearest to them. The height of the clypeus, which is straight and slopes a little forwards, is equal to half that of the facial space.

*Legs* moderately long, slender, with the usual spiny armature. Colour brownish-yellow, an imperfect band across the middle of the femora, the posterior extremities of the tibiæ blackish; the metatarsi of the third and fourth pairs also indistinctly annulated with blackish.

*Abdomen* yellowish-brown, clothed with short whitish and other hairs; the upperside has an irregular black bar along the middle, followed by some irregular black angular bars or chevrons above the spinners, and some irregular black patches or markings on the sides; the underside has a broad longitudinal dark brown band. The genital aperture is of simple but characteristic form.

The *falces* are yellow-brown, tolerably long, strong, clothed with short grey hairs.

The *maxillæ*, *labium*, and *sternum* are dull yellow, the maxillæ and labium tinged with brown.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## DYSDERINA, Simon.

### **Dysderina plena,** sp. n.

*Adult female*, length $1\frac{1}{4}$ lines.

*Cephalothorax* longer than broad, the portion behind the ocular area almost circular, gradually rising in a depressed subconical form to its highest point at the thoracic junction; no impression or indentation, however, indicates this point, nor are any of the normal grooves or indentations visible. It is covered, most thickly on the sides and hinder part, with minute granulosities, and is of a bright yellow-brown colour, with a blackish marginal line.

*Eyes* 6, large, closely grouped together; the posterior row straight, consisting of four eyes, contiguous to each other and scarcely differing in size; the hind-central pair are of a short oblong-oval form. Each of the anterior pair is almost contiguous to the hind-lateral and hind-central eye on its side. The interval between the anterior pair of eyes (which are distinctly the largest of the six) is less than half a diameter. The height of the clypeus is less than the diameter of one of the anterior eyes, which form a shorter row than the four posterior eyes.

*Legs* moderate in length and strength. The femora strongest, increasing gradually above from the anterior to the posterior extremity, those of the first and second pairs strongest. Spines on these latter only—five pairs (long and strong) beneath the tibiæ, and three pairs beneath the metatarsi, in two parallel rows; also beneath the femora of the first and second pairs is a row of three spines on the outer side and two on the inner side. The colour of the legs is dull orange-yellow.

*Falces*, *maxillæ*, *labium*, and *sternum* similar in colour to the cephalothorax.

*Abdomen* of a pale luteous colour, connected with the cephalothorax by a short sheathed rugose pedicle. The anterior two-thirds of the upperside of the abdomen covered with a coriaceous plate similar to the cephalothorax in colour and of a short broad-oval form; a similar plate underneath includes the pedicle, the spiracular openings, and the genital aperture, and reaches rather more than halfway from the genital aperture towards the spinners. The genital aperture is of a transverse-oval form.

*Hab.* Mexico (*H. H. Smith*).

## THERIDION, Walckenaer.

### **Theridion facetum,** sp. n.

*Adult male*, length scarcely 1 line.

*Cephalothorax* as broad behind as long, and much broader behind than in front; lateral marginal impressions very slight. Colour yellow, the sides marked with darker suffused converging rays; a broad black-brown central longitudinal band includes the ocular area and becomes narrower gradually to the posterior extremity.

*Eyes* of moderate size, subequal. They are rather closely grouped; the ocular area occupies the whole width of the fore part of the caput, and is a little prominent. The four central eyes form a trapezoid if anything slightly longer than broad, and whose anterior side is longer than the posterior. The hinder row forms very nearly a straight line, if anything the very slight curve of it has its convexity directed forwards when looked at from above and behind. The interval between the hind-central pair is little, if any, more than half a diameter, while that which separates each from the hind lateral on its side is very nearly a diameter. The fore-centrals are much wider apart than each is from the fore-lateral eye on its side, the interval between each fore-central and the fore-lateral next to it being less than half a diameter. The laterals are contiguous on a slight tubercle, and appeared to be rather the largest of the eight. The fore-centrals are on a strongish prominence, and the clypeus, which is strongly impressed just below the fore-centrals, considerably exceeds half the facial space in height.

*Legs* 1, 4, 2, 3, moderately long, slender, furnished with longish hairs only. They are of a yellowish hue suffused with deep brown, the lower part of the femora yellow, into which the brown hue gradually merges.

*Palpi* short, yellow, furnished with a few longish bristly hairs only. The humeral joint is somewhat tumid in form, and the cubital joint rather nodiform; the radial joint is very short, and has its fore extremity

directed outwards, with its whole width greatly produced, broad and rather rounded at its hind extremity, and directed against the palpal organs; the digital joint is very small, oval, with its convex side directed inwards. The palpal organs are very simple, with a small, black, spiny, somewhat corkscrew-shaped process at their extremity.

*Falces* moderate in length and strength, straight, vertical.

*Maxillæ* straight, considerably inclined over the labium, and obliquely rounded at their outer extremity.

*Labium* short, its height hardly more than half its breadth, rounded at the top; these parts are yellow slightly tinged with yellow-brown.

*Sternum* broad-heart-shaped, the posterior point obtusely truncated; colour yellow.

*Abdomen* short-oval, projecting considerably over the base of the cephalothorax; of a pale dull yellowish hue, thinly clothed with hairs, and with a large, nearly round, tolerably well-defined black patch on the upper-side rather behind the middle. The spinners are short, compact, and of a blackish-brown colour.

*Hab.* GUATEMALA, Antigua? (*Sarg*).

## FRONTINA, Keyserling.

### **Frontina phœnicea,** sp. n.

*Adult male*, length slightly over 1 line; *adult female*, a trifle larger.

*Cephalothorax* deep rich shining black-brown. Legs and palpi similar in colour.

*Abdomen* glossy, clothed thinly with slender pale bristles; colour crimson. Spinners black-brown.

*Maxillæ*, *labium*, and *sternum* similar in colour to the legs. In the female the area of the genital aperture is large, very convex, and of a deep black-brown hue.

The *legs* are long, slender, subequal in length, 4, 1, 2, 3, furnished with hairs, and a slender spine on the genual and one also near the base of the tibial joint.

The *palpi* of the male are rather short. The radial joint is very short and of peculiar form, produced both in front and behind, the hinder part much the shortest and broadest, roundly obtuse at its extremity; the anterior portion also broad and obtuse, but rather narrower at its extremity, which is strongly and abruptly hooked. The digital joints are large. The palpal organs are highly developed, prominent and complex, with one of their processes produced beneath into a strongish, circularly-curved, prominent, tapering, black spine.

The *eyes* are rather small, subequal, and form a large nearly semicircular figure whose convex side is directed forwards. The four centrals form a trapezoid, longer than broad; those of the hind-central pair are of a pearly hue, oblong-oval in form, and much nearer together than each is to the hind-lateral eye on its side. The eyes of the posterior row are in a straight line. The height of the clypeus exceeds half that of the facial space, and from it (in the male), just below the fore-central pair of eyes, a curved spine turns upwards.

*Hab.* GUATEMALA, Antigua (*Stoll*).

Closely allied to *Frontina* (*Linyphia*) *coccinea*, Hentz. The sexes resemble each other in all general characters. The specimens described were forwarded to us by Mr. Sarg.

## TETRAGNATHA, Latreille.

### **Tetragnatha pachygnathoides,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines.

The whole of the anterior part of this spider is yellow; the legs with rather paler indistinct annulations.

*Cephalothorax* of normal form.

*Eyes* in the ordinary position. The four centrals form a square whose anterior side is rather the shortest. The two hind-centrals, with the fore-laterals, form a transverse straight line; those of each lateral pair are seated on a strongish oval tubercle, but not quite contiguous to each other; the fore-centrals are also seated on a strong tuberculiform prominence.

*Legs* long, 1, 2, 4, 3, moderately strong, the metatarsi of the first pair, however, greatly attenuated; very unequal in length; the first pair at least four times the length of the spider, those of the third and fourth pairs very much the shortest. Spines on the femora apparently stronger and more numerous than on the tibiæ, but the armature of the legs had been much damaged.

*Palpi* short and slender; radial joint longer and much more strongly clavate than the cubital; the stump only of a strong spine-like bristle at the anterior extremity of the upperside of the latter; digital joint long and narrow. The palpal organs consist of a large, shining, pale, fillet-shaped lobe, with which several other strong corneous processes are connected on the outer side; and on the inner side, at their base, is an elongate straight process whose extremity is rather enlarged and rounded.

*Falces* long and strong, tapering, very divergent, but not projecting forwards; from tip to tip in front nearly equal to the length of the cephalothorax; the teeth on their inner sides are neither very strong nor numerous. The fangs are long, for the most part straight, but their pointed extremities rather abruptly bent.

The *abdomen* is of a subcylindric form, rather longer than the cephalothorax, and a little broader behind than in front; near the hinder extremity, above the spinners, is a strongish somewhat subconical prominence. Its exact form is uncertain, as its extremity (in the only example I have seen) was injured. The colour of the abdomen is a pale luteous-yellow; the sides, underside, and a portion on each side of the upper surface more or less thickly clothed with bright silvery, somewhat scale-like, spots of various sizes; the distribution of these spots on the upper surface leaving an elongate, central, longitudinal, tolerably well-defined, dentated unspotted band.

*Hab.* PANAMA, Volcan de Chiriqui (*Champion*).

## DELOZEUGMA, Cambridge.

### **Delozeugma depictum,** sp. n.

*Adult male*, length 4 lines; length of cephalothorax $1\frac{3}{4}$ lines, width at the widest part rather over $1\frac{1}{2}$ lines; length of falces $1\frac{1}{4}$ lines.

The *cephalothorax* is short, broad-oval, truncated in front, and the lateral marginal compression on each side at the caput is rather abrupt and strong; its colour is bright reddish yellow-brown, covered thinly with a short grey pubescence, and with an unevenly edged longitudinal lateral stripe, and a narrower marginal one on each side of a deep reddish-brown hue, the normal lateral grooves are also indicated by short broken converging dark brown markings; from each of the hind-central pair of eyes an indistinct rather diffused longitudinal line runs backwards, and the normal central indentation is marked by a very distinct but fine blackish longitudinal line.

The *eyes* are very nearly normal in relative size and position; but the intervals between those of the posterior row are very nearly equal, if anything the interval between the central pair is slightly less than that between each of them and the lateral eye of the same row on its side. The intervals between those of the anterior row are equal; the line formed by the central pair of this row is distinctly longer than that of the hind-central pair. The four central eyes form a quadrilateral figure whose length is a little greater than its breadth and its hinder side shortest. The height of the clypeus is about equal to the diameter of the fore-central eyes.

The *falces* are long and strong, nearly cylindrical, but rather tapering forwards, and projected almost on a level with the cephalothorax; each falx has two strong, sharp, prominent teeth on the outer side of the lower margin, and the fang, which is long, strong, and well curved, rests longitudinally along the underside of the falx, reaching to its hinder extremity. The fang has no tooth on its underside, like that of *D. formidabile*, Cambr. The colour of the falces is a deep rich red-brown.

The *legs* are tolerably long, moderately strong, 4, 1, 2, 3. They are pale brownish-yellow in colour, with a few indistinct dusky annulations and some fine short spines on the tibiæ, metatarsi, and femora, the spines on the tibiæ of the first and second pairs of legs being arranged longitudinally two and two in four pairs.

The *palpi* are short; the radial is a little longer than the cubital joint, and has a strong, tapering, slightly curved, and obtusely pointed apophysis at its extremity on the outer side; from the hinder margin, a little in advance of the middle of this apophysis, is a strong, vertical, tapering, sharp-pointed spine-like tooth, giving, from some points of view, a strongly bifid termination to the apophysis. The digital joint is long,

oval, tapering, its length considerably exceeding that of the radial and cubital joints together; its colour, with the fore part of the radial joint, is dark yellow-brown, the rest of the palpus yellow. The palpal organs are simple, well developed, and rather prominent; the humeral joints of the palpi have three short spines near their extremity on the upperside, and the radial has a few bristly hairs on the inner side.

The *maxillæ* and *labium* are normal, and similar to the falces in colour; the *sternum* is similar in colour to the legs.

The *abdomen* is short-oval, and somewhat cylindrical in form, of a dull yellowish colour, with an interrupted black marginal band on the upperside, within which, about the middle, are two short longitudinal black lines, followed towards the spinners by several angular black bars or chevrons. The spinners are short, the four outer ones of equal length; immediately below them is a triangular prominence tipped with a sharp chitinous deep red-brown point. This prominence may possibly be the covering of the orifice leading to a spiracular organ. Close to their base on each side of, and a little above, the spinners is a short, curved, black line.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

This spider may easily be distinguished from *D. formidabile*, Cambr. (*anteà*, p. 106), not only by its smaller size, different coloration, and distinct pattern, but by the absence of the characteristic tooth near the base on the inner side of the fangs of the falces.

## EURYOPIS, Menge.

### **Euryopis spinigera,** sp. n.

*Adult male*, length slightly over 1 line.

*Cephalothorax* very convex above, the normal grooves and indentations obsolete, except that at the thoracic junction, which is rather large and shallow; scarcely any lateral marginal compression at the caput; of a short, broad-oval form, blunted at the fore-extremity—looked at in profile the caput is slightly curved, nearly level, at the occiput is a slight transverse ridge or prominence, whence the thoracic slope is long, steepish, and curved; at and in front of the occiput are several long, prominent spines; the ocular area terminates in a strong rounded prominence, bearing the fore-central pair of eyes. The cephalothorax is dark yellow-brown in colour, obscurely veined with blackish, and its surface is slightly roughened or granulose. The height of the clypeus, which is impressed at the upperside and slightly prominent below, is greater than the length from the fore-central eyes to the ridge at the occiput, or at least four times that of the facial space.

The *eyes* are not very unequal in size; they are in two transverse rows, the posterior row nearly straight, its very slight curve directed forwards, the anterior row curved, the convexity of the curve also directed forwards. The four centrals form a quadrangle whose transverse diameter is a little greater than its longitudinal, its fore side longest and its sides shortest. The eyes of the hinder row are equally separated by rather more than an eye's diameter. Those of each lateral pair are seated a little obliquely and contiguous to each other.

The *legs* are short, 4, 1, 2, 3, moderately strong, furnished with hairs only; the coxæ are yellow, the femora reddish-brown suffused with blackish, the genua and tibiæ blackish, the metatarsi and tarsi orange-brown. The femora are rather long and bent.

The *palpi* are short, slender, dull yellow-brown; the cubital joint very convex above, or nodiform, the radial joint very short and spreading, produced considerably on the inner side in an obtuse form, and furnished with some bristly hairs. Digital joint and palpal bulb large; palpal organs simple, sinuously marked with yellow-brown, and with a small slightly curved spine at the extremity.

*Falces* very small, straight, conical, dull yellowish, suffused in front with dusky black.

*Maxillæ* very strongly inclined (nearly meeting) over the *labium*, which is very short, not half as high as it is wide, and almost squarely truncated at the apex. These parts are similar in colour to the falces.

The *sternum* is large, very glossy, convex, heart-shaped, its posterior extremity rather drawn out, and ending in an obtuse form between the posterior coxæ; its colour is dark yellow-brown.

The *abdomen* is rather large, oval, somewhat flattish; it is of a deep brownish colour; the upperside is thickly furnished with small reddish-brown shining tubercles or granulations, to each of which is articulated a long, prominent, straight, sharp-pointed, pale-coloured spine. The underside is dark reddish-yellow-brown, the anterior portion, as well as some patches of the hinder part, are of a somewhat coriaceous nature.

The colours of the abdomen can scarcely be relied upon, as the spider had apparently been allowed to get dry and again put into spirit. The spinous abdomen, however, is very characteristic.

*Hab.* GUATEMALA, Sachsamash coffee-plantation, and between Pitet and Chicoyoito (*Sarg*).

## DOLICHOGNATHA, Cambridge.

### Dolichognatha diversa, sp. n.

*Adult female*, length 1 line (to spinners); height of abdomen nearly 1 line; breadth of abdomen $\frac{3}{4}$ of a line.

*Cephalothorax* rounded behind; caput large, raised, prominent, occiput well rounded; colour yellow, with a strong, transverse, irregular, somewhat angulated, black-brown band a little behind the eyes; from this band two curved blackish lines run backward, one on each side of the occiput, their posterior ends converging but not touching and somewhat bifid, and near the margin of the thorax on each side close to the junction with the caput is a short linear black spot. The ocular area slopes a little downwards, and the height of the clypeus is about equal to the diameter of one of the fore-central eyes.

*Eyes* occupying a considerable area on the whole width of the caput, seated on strong black tubercles, that of the fore-central pair strongest and forming one prominence; they are placed in two transverse rows, the posterior row very slightly curved, the convexity of the curve directed backwards, the anterior row more strongly curved and in an opposite direction. It is difficult to judge accurately the distance between the eyes; they are seated variously on tubercles, but those of the anterior row appear to be about equally separated. The interval between those of each lateral pair is equal to that between the hind-lateral and hind-central eye on each side. The hind-centrals are smallest and contiguous to each other, and the fore-centrals are largest.

*Legs* rather short, tolerably strong, 1, 2, 4, 3. Those of the first two pairs much the longest and strongest. The tibiæ gradually strengthen from the middle to the fore extremity. Their colour is yellow, marked and annulated with yellow-brown and blackish, but not very uniformly. They are furnished with hairs and a few fine spines.

*Palpi* short, slender, yellow, the digital joint, and a spot at its base, blackish-brown, with a terminal, curved, apparently non-pectinated claw.

*Falces* long, strong, yellow-brown, suffused in front, but not regularly or very distinctly, with a darker hue; at the extremity on the inner side near the base of the fang are two teeth.

*Maxillæ* moderately long, much dilated at their extremity. *Labium* short, its height less than half of its transverse dimension, and its apex slightly roundly truncated. These parts are yellow-brown, indistinctly marked with a darker hue, and are almost at right angles to the *sternum*, which is large, somewhat sub-triangular or shield-shaped, of a pale yellowish colour marked with curved yellow-brown stripes, having three tolerably well-defined, large, oval, yellow, contiguous markings—one at its posterior extremity, the other two transversely towards the opposite end.

The *abdomen* is large, (and when looked at in profile) higher than long; on the upperside are four strongish subconical prominences—two towards the fore extremity, strongest and widest apart, the four forming very nearly a square. It is of a general whitish hue, mixed with indistinct blackish and brownish markings. The most distinct marking is a large somewhat cruciform white one in front of the two anterior prominences, the hinder point of the cross being dilated and truncate. The underside has a transverse black bar just in front of the spinners, and another across the middle, close behind the genital aperture, which

is of distinctive form and placed much nearer the middle of the underside than usual, almost like that of *Mesopneustes*, Cambr. (p. 126, *anteà*).

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

MODISIMUS, Simon.

**Modisimus maculatipes,** sp. n.

*Adult female,* length 1 line.

*Cephalothorax* nearly round, broadest behind; the middle of the fore part of the caput is raised into a strong prominence bearing the eyes at its summit. The normal lateral indentations are slight, that between the caput and thorax strong. It is of a dull greenish-yellow colour, with dusky ill-defined converging lines on the sides; two (parallel) longitudinal, not sharply defined, violet-coloured lines run backwards from the hinder side of the prominence on the caput.

*Eyes* six, of considerable size, rather closely grouped in a largish quadrangle round and near the summit of the caput, seated on strongish black tubercles; they are in two transverse rows, the anterior row of two eyes (the largest) being a little shorter than the posterior row, which is slightly curved, the convexity of the curve directed forwards. The interval between the hind-central pair is greater than that between each and the hind-lateral eye next to it, being about a diameter's extent, each hind-lateral being nearly contiguous to the hind-central on its side.

*Legs* excessively long and slender, furnished only with very short fine hairs; colour pale yellowish, with a few dark brown or blackish spots on the tibiæ, genua, and femora; tarsi multiarticulate, each articulation furnished with a ring of hairs.

*Palpi* very short, slender, like the legs in colour, but with the extremity of the digital joints blackish.

*Falces* short, not very strong, straight, and with a dusky blackish-brown, slightly oblique stripe in front.

*Maxillæ* and *labium* normal.

*Sternum* large, very convex, round behind, broadly hollow-truncate in front. Colour dusky brown, speckled with yellowish points, and with a narrow yellow margin.

*Abdomen* short but globular above, and pointed at the spinners; it is of a pale bluish sea-green colour, marked near the middle of the upperside with two pairs, pretty close together, of deep dull greenish spots, the anterior pair largest; on the underside also, in front of the spinners, is a single dark spot with a lighter greenish longitudinal line between it and the genital aperture, which is on a dark spot, not very prominent, but of characteristic form. About twelve or fourteen eggs loosely connected with silken web accompanied this spider.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

"Found with egg-case in a very small, thick, irregular web under a leaf."

**Modisimus putus,** sp. n.

*Adult female,* length slightly over 1 line.

This species closely resembles *M. maculatipes* in all essential characters, but is paler; the general colour is dull luteous yellow, tinged with greenish on the thorax and abdomen; on the abdomen, besides the two pairs of dark spots at the middle of the upperside, there are some indistinct whitish spots on each side disposed in two somewhat slightly oblique lines, and two longitudinal parallel lines following the dark spots. There is also no longitudinal central marking on the cephalothorax, or if there is it is almost obsolete, and the only visible spot on each leg is a very small indistinct one towards the fore extremity of the tibiæ. The genital aperture is also different in form, being larger and (looked at in profile) much more prominent. The false joints, or articulations, of the tarsi seem also to be more distinct.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## **Modisimus inornatus,** sp. n.

*Adult female*, length $1\frac{1}{3}$ line.

This spider is nearly allied to both *M. maculatipes* and *M. putus*. It is, however, rather larger, and differs in colours and other respects. The *cephalothorax* is very broad, and very deeply excavated or indented behind at the insertion of the abdominal pedicle. The thoracic indentations are also very strong. The *eyes* are nearly equal in size and in the same general position, but the hind-centrals are rather nearer together than in the other two species mentioned, making the intervals between the eyes of the hinder row more nearly equal. The four central eyes form very nearly a square whose posterior side is slightly shortest. The tubercles on which the eyes are seated are very strong and of a deep brown colour. The cephalothorax is a dull brownish-olive tinged brown, with a broad yellow-brown longitudinal central band, which also includes the eminence on the caput.

The *legs* are very long, slender, similar in colour to the cephalothorax, and near the extremity of the femora and tibiæ is a largish, ill-defined, dull yellowish-brown annulus, the space between the annulus and the end of the joint being pale whitish-yellow; the genua are also dull yellowish-brown. The tarsi are multi-articulate like those of the other species of the genus.

The *palpi* are very short and slender, devoid of a terminal claw, and of a dull yellowish-brown hue.

The *falces* are similar to the legs in colour.

The *maxillæ* and *labium* are more suffused with dusky brown.

The *sternum* is exceedingly convex, furnished with a few long, prominent, bristly hairs, very broadly truncated behind; its colour is dusky yellow-brown, with a tolerably well-defined oval patch along the middle, and the lateral margins of a brownish-yellow hue (like the legs).

The *abdomen* is of a dull bluish sea-green colour, with two curved longitudinal lines of dark brownish-black spots in pairs along the middle of the upperside, the convexity of the curves directed outwards, and the space between them paler than the rest; besides these, there are numerous other dark spots on the sides tinged with green. The genital aperture is of a different form from that of the other two species, and connected with it immediately behind is a prominent globular pale process, which at first sight looks like a fortuitous accretion, but on close examination it appears to be a portion of the normal structure of that part. The spinners are small, short, compact, and of a blackish-brown colour.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

"Found in a thick web forming a tent about 4 inches long and $2\frac{1}{2}$ wide, between the sticks of a paling, and protected by leaves, in a dark, shady, damp cacao-orchard."

## MICROMERYS, Simon.

## **Micromerys delicatus,** sp. n.

*Adult male*, length $1\frac{1}{4}$ line.

*Cephalothorax* round, with the clypeus prominent and drawn out to an extent equal to half that from the line of the eyes to the hinder extremity of the thorax, and somewhat squarely truncate at its extremity. The normal grooves and indentations are scarcely perceptible. The colour of the cephalothorax is pale yellow.

*Eyes* six, in two triangular groups of three each in a transverse line, occupying the whole width of the caput, those of each group on a strongish black tubercular prominence and nearly contiguous to each other; the interval between the interior eyes of the two groups is equal to three (if not more) diameters; these eyes are the apices of the two triangles formed by each three eyes respectively. The anterior eye (looked at from above and behind) of each group is the largest.

*Legs* excessively long and slender, 1, 2, 4, 3, furnished only with very short fine hairs. Colour similar to that of the cephalothorax.

*Palpi* long, very strong, similar to the legs in colour; the humeral, cubital, and radial joints greatly incrassated, the latter very glossy and of an almost globular form on the upperside, and furnished at the fore extremity with a few long, very slender hairs; digital joint small and short. Palpal organs greatly developed, consisting of a large, glossy, obtuse-oval, whitish bulb directed inwards, its posterior

extremity emitting an excessively long, slightly tapering, nearly straight process, which ends in a sharp spine-like point; there are also some long, strong spines and processes directed from the outer side backwards; the outermost of these is perhaps the most conspicuous, being a strong tapering dark-coloured spine of great length and a somewhat corkscrew form.

*Falces* rather long, not very powerful, pale yellow in colour; a little prominent at the base in front, with a kind of lateral pushing in or excavation at that part, near which there is also a strong black spine-like bristle; below this, about halfway towards the extremity, is another strong prominence furnished at its fore side with a group of very short, blunt, dentiform spines, and below this again is a single strong bent tooth directed forwards, with again another on the inner side close to the fang.

*Maxillæ*, *labium*, and *sternum* similar to the legs in colour. The maxillæ meet over the labium, which is much broader than high, and the sternum is nearly round, having a very slight angularity at the hinder extremity.

The *abdomen* is oval, broader behind than before, rather produced and obtuse at its upper hinder extremity, and of a pale dull luteous yellow hue. Spinners very short and compact.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

"Found under a leaf close to a small irregular thickish web."

## METAGONIA, Simon.

### **Metagonia caudata,** sp. n.

*Adult female*, length $1\frac{2}{3}$ lines.

*Cephalothorax* round behind, drawn out in front into a very prominent clypeus, whose extremity, looked at from above and behind, is of a somewhat roundish-pointed form, and nearly equal in length to that of the rest of the caput. Caput small, the normal indentation dividing it from the thorax strong; thoracic indentation very large and deep. The colour of the whole of the fore part of the spider is yellow.

The *eyes*, six in number, are in two groups in a transverse line; each group, with three eyes, contiguous to each other, and forming thus a triangle, or they may perhaps be conveniently described as having two eyes contiguous to each other in a line at right angles to the transverse axis of the caput; on each side of the caput, and within the two lines thus formed, are two others, one contiguous to each two and placed in the middle of the line formed by each two; the inner eye of each triad is of an oval form, and the two inner eyes are separated by an interval a little greater than their longest diameter. Each group of eyes is seated on a prominence.

The *legs* are of great length, 1, 2, 4, 3, and very slender, furnished inconspicuously with fine hairs; their colour is yellow, the genua deep brown, with the extremities of the tibiæ and the posterior extremity of the metatarsi deep brown or black.

The *falces* are short, subconical, moderately strong.

The *maxillæ* are long, inclined over the labium, which is large, broader than high, its apex narrower than the base, and a little roundly truncated.

The *sternum* is large, of a somewhat subtriangular form, drawn out and truncated at its posterior extremity, of a dull blackish-brown hue, speckled and laterally margined with yellow.

The *abdomen* is rather elongate, and has its hinder extremity drawn out into a caudiform obtusely-pointed elongation, which is, however, less in length than the rest of the abdomen, being about as long as the distance from the spinners to the genital aperture. The abdomen is dull luteous yellow in colour, clothed thinly with very fine hairs. The genital aperture is simple and inconspicuous, but of characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## ERVIG *, gen. nov. (Sicariidæ).

*Cephalothorax* flattened, elongate-oval, twice as long as wide, roundly truncate before and more squarely truncate behind; the normal grooves between the caput and thorax strong; the central impression at the junction of these two large, deep, circular, and pit-like; lateral marginal impressions at caput slight.

*Eyes* six, in three pairs, of moderate and about equal size—a central pair on a slight tubercle, contiguous to each other, and a pair on each side at the extreme width of the caput, on a very strong geminated tubercular eminence, that of the anterior eye strongest; the eyes of each lateral pair are nearly but not quite contiguous to each other, and form a line at right angles to the nearly straight line of the central pair and the fore-lateral eyes; the two posterior eyes are misshapen, of rather a subtriangular form, and as large or rather larger than the fore-laterals.

The *clypeus* is prominent, convex, and its height is about equal to the diameter of two of the central eyes.

*Legs* moderate in length and strength, not greatly unequal: 1, 4, 2, 3. Clothed with numerous rather long, somewhat bristly hairs, but without spines; terminal tarsal claws three, on a small distinct claw-joint; the superior claws armed throughout nearly the whole length with long teeth (on the first pair eight); the inferior claw long, nearly straight, but bent sharply downwards at its base, close beneath which is a single tooth. At the side and beneath the terminal claws at the extremity of the tarsus are various opposed supernumerary pectinated claws or spines.

*Palpi* short, armed like the legs; digital joint equal to the radial and cubital together; without terminal claw, but ending in a short, sharp, corneous point on the upperside.

*Maxillæ* long, strong, much bent, and inclined over the labium so that their extremities almost meet.

*Labium* oblong.

*Falces* moderately long and strong, straight, vertical, subconical; fang very short, curved, and its point, though sharp, broad when looked at from below.

*Sternum* oblong-oval, about twice as long as broad, blunt-pointed behind, the fore extremity somewhat drawn out and hollow-truncate.

*Abdomen* oval, the upperside of the posterior extremity drawn out into a not very strong subconical prominence, whence it slopes underneath backwards in an incurved line to the spinners. The spinners are closely grouped, the four outer ones short, about equal in strength, the hinder ones slightly longest: these last are much wider apart than the fore ones, and with them form very nearly a semicircle.

### **Ervig albolineatus,** sp. n.

*Adult female*, length from 3 to 4 lines.

The *cephalothorax* is flattened, so that the caput and thorax are level with each other; it is yellow-brown in colour, clothed with coarse, adpressed, white hairs, some of which form a rather distinct submarginal line on each side; two other lines similarly form an elongate somewhat drawn-out oval figure from the middle of the ocular region to the thoracic fovea; this figure has its hinder half longitudinally bisected by a fine line of similar white hairs. Some of the hairs also on the sides of the thorax show a tendency to converging lineation.

The *legs* are yellow, the basal half of the femora, the genua, and the extremities of the other joints strongly tinged with reddish yellow-brown.

The *maxillæ*, *labium*, *falces*, and *sternum* are dark reddish-yellow-brown, thinly clothed with coarse white hairs like the cephalothorax; on the sternum some of these hairs also form a marginal line on each side and a central longitudinal one.

The *abdomen* is of a pale dull luteous colour, thickly clothed with fine, adpressed, yellowish-grey hairs; a longitudinal band, narrow at the fore extremity and gradually widening to the posterior abdominal tubercle, which it encloses, and to which for a short distance it converges, is margined by a very distinct but fine wavy line of white hairs; this band is clothed with yellowish hairs deepening to a dull golden at its hinder extremity; an elongate-oval dark brown figure, similarly margined, runs from the abdominal tubercle to the spinners, where it is met by a still broader dark brown band, similarly bordered, running the whole length of the underside of the abdomen, and including the spiracular plates and the genital aperture. This last is simple, forming a largish transverse slit.

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* Nom. propr.: a Gothic Noble.

*Hab.* Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

This pretty spider combines some remarkable characters, making it somewhat difficult to assign it its exact systematic position. I do not, however, think that further research will very materially alter that in which I have here placed it, *i. e.* in the group connecting the Theraphosidæ and Filistatidæ with the Dysderidæ. Perhaps it comes nearest to the genus *Periegops*, Sim.

## SPHECOTYPUS, gen. nov. (Myrmecidæ).

*Cephalothorax* narrow, elongate, divided into five well-marked segments by deep transverse triangulations or constrictions, with a pair of legs articulated to each of the four posterior segments, the caput forming the first segment; this part is rounded behind, but transversely truncate before, and angulated at its lower fore-corners, which is its widest part; the posterior extremity turns up rather abruptly above, as though to permit of the elevation of the abdomen; the height of the clypeus is less than half that of the facial space and slopes forwards.

*Eyes* small, not very greatly differing in size, excepting the two central eyes of the anterior row, which are much the largest of the eight, the fore-laterals being the smallest; in two transverse nearly equally curved parallel rows, the anterior row much the shortest and slightly the most curved.

*Legs* moderately long, slender, 4, 1, 2, 3, armed with a few long, fine spines on the tibiæ, tarsi, and metatarsi, and one or two on the femora of the third and fourth pairs; they are articulated to the face of the sternal surface; tarsal claws two, beneath which is a compact claw-tuft. The coxæ are of inordinate size and length, rather bent, and those of each of the two hinder pairs are articulated very near to each other respectively. The *sternum* is therefore of an abnormal form, and at the fore extremity it is strongly bent inwards transversely just before the insertion of the first pair of legs.

*Falces* rather short, massive, conical, the anterior sides slightly flattened, or, in fact, somewhat hollow, with angular margins.

*Maxillæ* long, strong, nearly straight, narrowest across the middle just above the insertion of the palpi, and much broader at the top, where they are slightly rounded.

*Labium* long, more than half the length of the maxillæ, broader at the base than at the apex, which is truncated, broadest in the middle, just below which it is rather constricted on the margins and across the middle.

*Abdomen* joined to the cephalothorax by a long longitudinal sheath-like pedicle, which fits into the abdomen in a short socket. The form of the abdomen is elongate, cylindric, oval, with a strong transverse constriction towards the fore extremity; the portion included in front of the constriction is covered with a coriaceous plate, at the middle of a corresponding one to which, underneath, the genital aperture is placed; behind the constriction are several transverse, dark, narrow ridges across the upperside, indicating (or simulating) a pristine segmental structure of the abdomen, the transverse ridges being apparently caused by folds in the epidermis.

This genus is nearly allied to *Myrmecium*, Latr., but the caput is narrowest in front in *Myrmecium*, and the anterior row of eyes is straight; the form also of the sternum is quite different, and also the method of articulation of the legs to the sternum: the cephalothorax is divided into three segments only in *Myrmecium*, the anterior of which includes not only the caput (as in the present spider), but also a portion of the thorax; the sternal plate beneath this portion is somewhat heart- or shield-shaped, much broader than any part of *Sphecotypus*, and to it on each side close together are articulated the coxæ of the first and second pairs of legs, whereas in the present

spider the coxæ of the four pairs are equally disposed throughout the whole sternal plate behind the caput. In *Myrmecium*, also, the abdominal plate runs completely round the fore extremity both above and beneath.

### **Sphecotypus formicarius,** sp. n.

*Adult female*, length 7 lines.

*Cephalothorax* black, densely marked with minute impressed punctures, and covered with fine, pale greyish, adpressed hairs, and a few long, fine, prominent ones; each segment is also clothed on the sides with more conspicuous white hairs.

The four central *eyes* form a quadrangle, whose transverse is rather greater than its longitudinal diameter. The interval between the hind-centrals is much less than that between each and the hind-lateral eye next to it, and the interval between the fore-centrals is less than a diameter.

The *legs* are deep rich brown, the tarsi yellow-brown; those of the first pair have the coxæ and femora conspicuously striped with yellowish.

The *palpi* are short, deep brown, the digital joint equal in length to the radial and cubital, densely clothed with coarse hairs, and devoid of a terminal claw.

The *maxillæ*, *labium*, and *sternum* are deep blackish-brown.

The *abdomen* is of a dull blackish hue, densely clothed with fine yellowish and white hairs or pubescence, tinged with yellowish on the upperside owing to the dull golden colour of the pubescence, and furnished thinly with longer hairs, some of which form a conspicuous white patch on each side below the constriction. The colour of the coriaceous plates above and below at the fore extremity of the abdomen is like that of the cephalothorax. The transverse ridges or folds on the posterior portion are each marked with a deep reddish-brown hue. The four outer spinners are short and of equal length, the inferior pair strongest, and immediately in front of them is a large, coriaceous, deep brown patch, thinly clothed with long, fine, whitish hairs, and with its hinder margin free and forming a curved lip in the middle, being no doubt the aperture to a spiracular organ. The genital aperture (placed on a rounded prominence at the hinder margin of the inferior coriaceous plate) is simple but characteristic.

*Hab.* PANAMA, Bugaba in Chiriqui (*Champion*).

Mr. Champion says:—"This spider is a perfect mimic of a large stinging ant, *Ponera* sp. ??" It would have been very interesting to have had some specimens of this ant with the spider.

## SYNÆMA, Simon.

### **Synæma madida,** sp. n.

*Adult male*, length 1½ line.

*Cephalothorax* as broad as long, very nearly round, the lateral marginal impressions at the caput very slight. It is yellow-brown in colour, rather palest in the ocular region and on the clypeus, and with a narrow red-brown marginal line; glossy, with some minute granulations near the lateral margins; about sixteen or eighteen long spine-like bristles are symmetrically disposed on the surface, five of them along the lower margin of the clypeus, which is considerably less in height than half the facial space.

*Eyes* in the ordinary position, occupying the whole width of the fore part of the caput, and seated on different-sized greyish tubercles; the fore-laterals are largest, and on the strongest tubercles; those of the posterior row are equidistant from each other; both rows are curved rather strongly, the anterior row rather the most curved, the convexity of the curves directed forwards; equal spaces also separate those of the anterior row. The four central eyes form a quadrangle broader than long and its fore-side shortest.

The *legs* are long, moderately strong, 2–1, 4–3, furnished with strong hairs and numerous long strongish spines of varied length on all the joints excepting the tarsi. They are yellow in colour, the femora and genua of

the first and second pairs yellow-brown, dark reddish-brown on the fore-sides; the fore half and base of the tibiæ, and in a less degree the fore part of the metatarsi, are also dark yellowish-brown. The legs of the third and fourth pairs are pale yellow.

The *palpi* are short, yellow. The radial is rather longer than the cubital joint, and has at its extremity a small slightly tapering apophysis, whose extremity is somewhat obliquely hollow-truncate. The digital joint is of moderate size, oval, pointed at its extremity, and has a semitransparent pointed curved process at its base on the outer side projecting prominently beneath. and as long as the radial apophysis. Palpal organs simple, not very prominent, their outer margin encircled with a black filiform spine.

The *maxillæ* and *labium* are yellow-brown. The *sternum* yellow.

The *abdomen* is short-oval, roundly truncate before and rather flattened above; it is of a pale brownish-yellow colour on the upperside (which is of a somewhat coriaceous appearance), margined with white, and with a very few red-brown points and long bristly hairs. The five normal impressed spots are a little darker than the rest of the surface. Near the hinder extremity is a largish, deep red-brown, well-defined marking, strongly excavated in the middle in front, and occupying the whole width of that part of the abdomen. The sides are marked with some deep red-brown parallel lines. The underside is pale yellow; the spinners are short, strong, compact, and immediately in front of them is the transverse opening to a spiracular organ.

*Hab.* MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

## COLEOSOMA, Cambridge.

### **Coleosoma flavipes,** sp. n.

*Adult male*, length 1 line.

*Cephalothorax* of a regular oval form, moderately convex, and equally obtusely pointed at each end. Clypeus convex, prominent to the lower margin, but impressed immediately beneath the ocular area, and equal in length to at least double the breadth of the ocular area or two-thirds of the facial space. The indentation at the thoracic junction is large and of a transverse form. Its colour is deep blackish brown.

The *eyes* are moderately large, and do not differ greatly in size; they are grouped tolerably closely together in an almost regular transverse crescent form; the posterior row is nearly straight, and its eyes equally separated from each other by an eye's diameter or slightly more. The anterior row is shortest and curved, the convexity of the curve directed forwards, and its eyes separated by less than a diameter.

The *legs* are rather long, very slender; pale yellow, with a longitudinal black stripe on each of the femora, but the stripe does not run throughout their whole length. They are furnished with hairs and a single long slender spine at the fore extremity on the upperside of the genua. The posterior extremities of the tibiæ of the fourth pair are marked with a conspicuous black blotch.

The *palpi* are moderately long, black-brown; the cubital joint is short, bent, nodiform, or roundly prominent in front. The radial joint is about equal in length to the cubital, but stronger, being dilated at its extremity and somewhat produced on its outer side; these joints are furnished with coarse bristly hairs. The digital joint is large, roundish-oval, furnished also with long bristly hairs. The palpal organs are prominent, not very complex, and have a strong tapering spine running in a circular form from their inner extremity close to their surface, and ending in a fine point near the outer extremity.

The *falces* are moderately long, about equal to the length of the facial space, or slightly longer; they are straight, tapering, and similar in colour to the cephalothorax.

The *maxillæ* are long, strongest and rather prominent at the base, of a curved form looked at underneath, inclined towards the labium, and a little rounded on the outer side at their extremities, which reach slightly beyond the extremity of the falces.

*Labium* short, broader than high, somewhat subtriangular, though rather roundly pointed at the apex. The labium and maxillæ are like the falces in colour.

The *sternum* is of a broad-oval form, convex, and of a darker hue than the cephalothorax; the hinder extremity does not appear to be defined, but runs over into the general covering of the thorax, the width between the coxæ of the fourth pair of legs being considerable.

The *abdomen* joins the thorax in a strong sheath-like pedicle, whose fore extremity above is deeply notched; the abdomen proper is elongate and divided into two parts by a very strong transverse constriction, the anterior portion largest, but the posterior part very abrupt and rounded at its extremity; the pedicle is yellow in colour underneath; the whole of the rest of the abdomen is black, with the constriction paler; it has a few granulations on its surface, and is thinly clothed with long, pale, rather bristly hairs; the spinners are very short, equal in length, and compact.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Coban (*Sarg*).

AMAMRA, Cambridge.

## **Amamra nigro-maculata,** sp. n.

*Adult female*, length (from the fore extremity to the point of the superior prominence of the abdomen) 4 lines, to the spinners $3\frac{1}{4}$ lines.

*Cephalothorax* oval, longer than broad, a little drawn out and obtuse in front, and the thoracic region somewhat raised; the lateral marginal impressions at the caput not strong; the area of the four central eyes not raised, but a little prominent. It is dull yellowish in colour, thickly clothed (like the whole of the spider) with hairs and whitish pubescence; at the hinder extremity of the caput is a strong whitish V-shaped marking. The height of the clypeus is less than half of that of the facial space.

The *eyes* of the central group form a small quadrangle longer than broad, and its posterior side shortest. The eyes of each lateral pair are in a line parallel with the lower lateral margin of the caput, seated on tubercles, and separated from each other by about half a diameter. The hind-central eyes are largest of the eight, seated on black spots, and rather more than an eye's diameter apart. In the middle of the quadrangle is a strong obtuse prominence surrounded by two yellow-brown, spine-like, prominent bristles in a transverse line.

The *legs* are tolerably long and strong, 1, 2, 4, 3, armed with short strong spines; similar to the cephalothorax in colour, the femora of the first, second, and fourth pairs marked at the fore extremity with black; the greater part of the genua of the first and second pairs also black, and at the middle of the femora of the second and third pairs is a blackish suffused indistinct annulus; the metatarsi and tarsi of the third pair are also indistinctly but broadly annulated with yellow-brown.

The *falces* are long, powerful, straight, vertical, slightly prominent near the base in front, and like the cephalothorax in colour.

The *maxillæ*, *labium*, and *sternum* are pale yellowish like the cephalothorax.

The *abdomen* is of moderate size, of a heart-shape, the fore extremity transversely straight, and the shoulders also straight, whence on each side it curves to a point in a prominent tubercle at its posterior extremity; beneath this tubercle is another less strong, about one third of the distance to the spinners, which this part of the abdomen overhangs. The upper surface of the abdomen is somewhat flattened and of a pale whitish cream-colour, with three longitudinal rows of black irregular spots or markings: the central one begins at the anterior extremity, the lateral ones near the somewhat angular shoulders, consisting of only three spots each, and converging towards the hinder extremity of the central row; there are also a few minute black points at the fore extremity of the abdomen. The underside is dusky, thickly marked with minute whitish points. The spinners short and compact, the anal tubercle closely grouped with them, subconical, and distinctly composed of three segments. The genital aperture is of characteristic form, and has a recurved, flat-sided epigyne connected with it.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

"Found spinning a perpendicular geometric web on the branches of a dead tree at nightfall in the open square in the village."

## FAVILA *, gen. nov. (Avicularіidæ, Simon; subfam. Ctenizinæ; group Cyrtauchenieæ).

*Cephalothorax* perceptibly longer than broad, rather narrower at its posterior than at its anterior extremity. Thoracic indentation large, deep, strongly curved, the convexity of the curve directed backwards. Caput but slightly higher than the thorax, rising in a very gradual slope to the eyes, when looked at in profile.

*Eyes* in two transverse, slightly curved rows, forming a transverse quadrangular area, its transverse diameter just double the length of its longitudinal. The curves of the two rows are opposed to each other, that of the anterior row directed backwards, that of the posterior row directed forwards. The fore-lateral eyes are the largest, the hind-centrals the smallest.

*Legs* moderately long, strong, 4, 1, 2, 3 or 4, 1, 3, 2, not greatly unequal in length, armed with more or less strong spines, excepting the tarsi of the first, second, and third pairs, those beneath the tibiæ of the first and second pairs strongest, one towards the fore extremity of the tibiæ of the first pair much longer and stronger than the rest, and also one of a similar nature nearer the hinder extremity of the tibiæ of the second pair. These tibiæ are incrassated, those of the first pair most strongly. Scopula beneath all the tarsi, excepting those of the fourth pair. Superior terminal tarsal claws toothed in apparently two rows, but not uniformly on all the tarsi.

*Palpi* moderately long, strong; radial joint much longer than the cubital, incrassate and rounded, larger in the middle than at the extremities, furnished with numerous spine-like bristles and fine spines.

*Falces* tolerably powerful, armed with numerous closely-grouped dentiform spines and spine-like bristles at their upper extremity on the inner side.

*Maxillæ* longer than broad, the sides parallel, a small number of minute blunt teeth at their base on the inner side.

*Labium* very small, broader than long; apex roundish, pointed, looking like a piece let into the sternum, which is excavated or hollowed out to receive it.

*Sternum* longer than broad, much the broadest behind, where it is of a somewhat obtusely subangular form; it has on it six shallow smooth impressions—four form a transverse, slightly curved line near the middle, the two central ones of these are much the largest and pear-shaped, the other two oval; opposite to and in front of each of the latter is another small, roundish, rather indistinct one.

*Abdomen* short, oblong-oval; spinners of superior pair moderately long, tapering; terminal joint shorter and less strong than the middle one.

### **Favila relatus**, sp. n.

*Adult male*, length 6 lines; length of cephalothorax 3 lines, breadth of ditto, $2\frac{1}{2}$ lines.

The whole of the fore part of the spider is yellow-brown, the cephalothorax marked with rather irregular converging blackish-brown lines or streaks, and the sides of the caput somewhat suffused with brown; the surface of the cephalothorax has a few hairs and bristles on it; the legs have a longitudinally striate appearance, from the hairs being arranged in stripes, with bare intervals of a rather paler hue than the rest. The eyes of the anterior row are about equally separated, and the row itself is very slightly longer than the posterior row; the fore-laterals are a little larger than the fore-centrals; the hind-laterals are of an elongate form, at right angles with the fore-laterals, and separated from them by less than an eye's diameter; the hind-centrals are considerably the smallest, of an oblong-oval form, and separated from the hind-laterals by the smaller diameter; the curve of the two rows is about equal and slight, that of the anterior row is directed backwards, that of the posterior forwards. The clypeus has several strong black curved bristles, prominent at the middle; its height is about twice the diameter of the fore-central eyes, or rather less than half the height of the facial space. The third pair of legs have the genua armed on the outer side with numerous short tooth-like spines.

The *palpi* have the digital joint very short, and there are numerous short bristly hairs at its upper fore extremity. The radial joint is long, tumid, or incrassated, and furnished with numerous bristly hairs on its fore part underneath. The palpal organs are well-developed, of a somewhat duplex-lobe form, the larger or upper lobe having a twisted appearance, and issuing from it is a curved tapering pointed spine.

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* Nom. propr.: a Gothic Duke.

The *abdomen* is of an oblong-oval form; deep blackish brown on the upperside, where it is clothed with hairs and short bristles. The underside is of a dull brownish-yellow hue, and the spinners paler.

*Hab.* MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

## ENRICO *, gen. nov. (Avicularіidæ, Simon; subfam. Ctenizinæ; group Cyrtauchenieæ.)

Nearly allied to *Amblyocarenum*, Simon.

*Cephalothorax* distinctly longer than broad. Caput convexly raised above the thoracic level, the central (thoracic) indentation strong, semicircular, the convexity of the curve directed backwards.

*Eyes* in two transverse rows of equal length, enclosing an area nearly three times longer (in its transverse measurement) than broad. The anterior row is curved, but not strongly, the convexity of the curve directed backwards; the posterior row more strongly curved, but in an opposite direction. The two fore-central eyes are smaller than the laterals of the same row, but the interval between them is rather less than that which separates each from the fore-lateral eye on its side; the hind-lateral eyes are separated from the fore-laterals by a space equal to that which separates the latter from the fore-centrals. The hind-central eyes are the smallest of the eight, and separated from the hind-laterals by a diameter's interval, and each with the fore-central and hind-lateral eye on its side forms a short, slightly curved row.

*Legs* short, strong, 4, 1, 2, 3. Scopula beneath the tarsi and metatarsi of the first and second pairs; four, not very strong, spines beneath the metatarsi of the first and second pairs; tarsi of all four pairs apparently devoid of spines; superior terminal tarsal claws with one strong tooth underneath near the base.

*Falces* strong, furnished in front along the inner margin towards their extremities with strongish teeth.

*Maxillæ* longer than broad, furnished with bristles, and numerous short blunt teeth along the middle towards the inner side.

*Labium* very small and short, broader than long; apex truncate.

*Sternum* considerably longer than broad and much narrowest in front; a little behind the middle are two long, slightly curved bare spots, whose anterior extremities are strongest and contiguous to each other, the two forming a somewhat V-shaped marking. The superior spinners are tapering, neither very long nor strong; the middle joint is longer and stronger than the terminal one.

### **Enrico mexicanus,** sp. n.

*Adult female*, length 12 lines; length of cephalothorax $4\frac{1}{2}$ lines, breadth $3\frac{1}{2}$ lines.

The *cephalothorax* (which is smooth and glossy) is yellow-brown in colour, the caput darkest; in the median line behind the eyes are a few prominent bristly hairs. The height of the clypeus is equal to half that of the facial space; the middle of this space forms a whitish-yellow patch, from which five or six strong black bristles are directed forwards.

The *falces* are similar to the cephalothorax in colour, darkest at the fore extremity.

The *legs* are yellow-brownish, with longitudinal stripes bare of hairs, and of a brighter hue on the tibiæ and genua. The genua, tibiæ, and metatarsi of the third pair are the most bristly, and strongly spinose; the spines on the two former joints are on the outer side only, those on the genua are most numerous, being short, strong, and obtuse.

The *palpi* are similar in colour to the legs, furnished with hairs and a few fine spines. The digital joint has a scopula beneath it.

The *abdomen* is oval, subcylindric, of a dull yellow-brown colour, the upperside purplish-brown. It is clothed with short hairs, among which, along the middle on the upperside, are some fine black bristly ones.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

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* Nom. propr.: a Gothic Ruler.

## CAREPALXIS, L. Koch.

### **Carepalxis nigriceps,** sp. n.

*Adult female*, length $1\frac{1}{4}$ lines; height from the spinners to the highest point of the abdomen $1\frac{1}{2}$ lines.

*Cephalothorax* short, much humped behind the occiput, and sloping gradually from the top to the eyes, the hump rounded and without any subdivision; the hinder slope very steep and a little hollow near the top; the colour of the caput, including the hump, black and well-defined, the rest of the cephalothorax yellow-brown. The caput and hump are covered thickly with coarse granulations and short bristly hairs. The height of the clypeus is a little less than half that of the facial space, and rather more than double the diameter of the fore-central eyes.

The *eyes* are in the normal position. The four centrals are on strong tubercles and about equal in size, forming a quadrangle broader than long, the fore-side rather shorter than the hinder one, and the sides rather the shortest. The lateral pairs are far removed from the central group, being placed near the anterior lower corners of the caput, and in a line almost parallel with its margin.

*Falces* rather long, strong, straight; colour yellow-brown with some darker cloudings near their base.

*Legs* short, rather strong, tapering, 1, 4, 2, 3, furnished with hairs and spines; colour yellow, the fore femora tinged with orange-brown.

*Maxillæ* strong, much broadest and rounded at the extremities, slightly divergent; colour dusky yellowish.

*Labium* short, broader than high, not half the length of the maxillæ; similar to the maxillæ in colour.

*Sternum* nearly round, with the posterior extremity rather drawn out into a broad obtuse point between the coxæ of the fourth pair of legs; colour dull yellow.

*Abdomen* large, of a yellow-brownish mottled hue, clothed with short whitish pubescence. The height is much greater than its length, and it towers over the thorax; the highest part is depressed in the middle, having an obtuse, somewhat slightly subdivided prominence on each side, with another less marked in the middle, in front of the others; the anterior side of the abdomen, which is nearly perpendicular, is marked by a central longitudinal well-defined black stripe thickly clothed with short black bristly hairs. The space also between and including the inner sides of the lateral humps is black and similarly furnished with black bristly hairs; between this black space and the spinners are four small black impressed spots in a quadrangle, whose anterior side is shorter than the rest, and above the two hinder spots is a large pale indistinct transverse bar. The sides and front of the abdomen are marked by some nearly parallel transverse darkish brown fine lines, and among the hairs with which the abdomen is clothed are some few black ones, stronger than the rest and of a bristly nature. The underside of the abdomen is dark brownish; the genital aperture has a short obtuse epigyne, or process, connected with it, of characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## WULFILA *, gen. nov. (Drassidæ).

*Cephalothorax* oval, longer than broad, truncate before; lateral marginal impressions at the caput slight; normal indentations slight.

*Eyes* small, on black spots, in a largish semicircle very near the fore margin of the caput and not very greatly differing in size. Anterior row much shorter, very slightly curved, the convexity of the curve directed forwards; posterior row much more curved in an opposite direction.

*Legs* very long and slender, 1, 4, 2, 3, furnished thinly with longish hairs, and spines of great length, the longest hairs on the tibiæ and metatarsi of the first two pairs. Terminal tarsal claws two.

*Palpi* devoid of any terminal claw.

*Falces* moderate in length and strength, directed forwards, straight, but slightly divergent.

*Maxillæ* long, straight, curved on the outer margins and rounded at the extremities, where they are wider than at the base.

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* Nom. propr.: a Gothic Chief.

*Labium* rather more than half the length of the maxillæ, narrower at the apex, where it is truncated, than at the base.

*Sternum* oval, truncated in front.

*Abdomen* rather elongate-oval, the spiracular plates forming two large, very convex, oval or circular humps or eminences; on the middle of the underside is a large kite-shaped black marking enclosing a crescent-shaped area, in or near which is (apparently) an opening to a spiracular organ, somewhat like that characteristic of the genus *Anyphæna*; immediately in front of the spinners are two transverse slits in a longitudinal line, probably the openings of other spiracular organs. Spinners moderate in length and strength, those of the inferior pair strongest. In general respects and appearance this genus is nearly allied to *Clubiona*. It is also allied to the Sparassidæ.

## **Wulfila pallidus,** sp. n.

*Adult female*, length nearly 2 lines.

*Cephalothorax*, *falces*, *maxillæ*, *labium*, and *sternum* pale yellow. *Legs* and *palpi* rather brighter and darker; *abdomen* of a dull luteous yellow; beneath the abdomen in the centre is a largish central black patch, semicircular in front, pointed and produced behind, and with a clear crescent-formed area in the middle, with which there appears to be connected the opening to a breathing-organ; the genital aperture is just in front of and between the round humps covering the ordinary spiracular openings, and is of large size and very characteristic form. Beneath the two terminal tarsal claws of the legs, springing from a minute supernumerary claw-joint, are two claw-tufts. Just at the base in front of the labium there appears to be another labium adhering to it, of much smaller size, a little longer than broad, with parallel sides and circular apex. The falces have numerous strong bristly pale hairs in front at their inner extremity, with a group of others less strong on the inner extremities of the maxillæ. The sternum has a black patch at the posterior extremity between the coxæ of the fourth pair of legs. The height of the clypeus is only equal to the diameter of the fore-central eyes. The eyes of the hinder row are separated by equal distances from each other, as are also those of the front row, of which the laterals appear to be largest of the eight. The palpi are long, slender, like the legs in colour, and furnished with hairs and long spine-like bristles; the digital joint is longer than the radial and cubital together.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

"In a thin loose web on the lower side of a cacao-leaf in a shady place."

## **Wulfila proximus,** sp. n.

*Adult female*, length nearly 2 lines.

In size, general characters, and colouring this species is very closely allied to the foregoing, *W. pallidus*, but it may be distinguished at once by the broad central longitudinal black stripe on the sternum, which extends over the base of the labium, and by the abdomen being margined underneath with a black stripe, indented and joining in with the central kite-shaped marking, and reaching to the spinners, the inferior pair of which are also of a dusky black hue. The two central eyes of the hinder row are also a little further from each other than each is from the hind-lateral eye on its side. The humped spiracular plates are oval and less strong than in *W. pallidus*, and the genital aperture is rather further removed behind them, being also of a different form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## **Wulfila diversus,** sp. n.

*Adult female*, length slightly over 2 lines.

Nearly allied to the two foregoing species, but may be readily distinguished from both by the *cephalothorax* being suffused, especially on the sides, with dusky black. The tibiæ of the first pair of legs are marked with a single longitudinal line of minute black spots, the most conspicuous of which is at the anterior extremity; a similar spot also marks the same extremity of the tibiæ of the second pair. The

*falces*, *maxillæ*, and *labium* are of a dusky yellowish-brown colour. The underside of the abdomen is marked like that of *W. proximus*, but with more conspicuous black stripes, and on the upperside is a longitudinal, rather tapering, but irregular broken black band reaching through its whole length to the spinners, which are of a dusky blackish hue. The prominent humped spiracular plates are less prominent than in *W. pallidus* and of an oval form; the genital aperture is removed further behind them, and is of a different form from that of both the foregoing species. The hind-central eyes are rather further from each other than each is from the lateral of the same row on its side.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## WITICA *, gen nov. (Epeiridæ?).

*Cephalothorax* short, broad, much dilated behind and quadrate in front; caput large, rather elevated, very convex in the occipital region; area of the fore-central eyes prominent. Surface covered with strong tubercular granulations.

*Eyes* rather large, on strong tubercles, and occupying the whole width of the caput; four centrals in a quadrangle, whose anterior side is rather the shortest, those of each lateral pair are considerably removed on either side, and contiguous to each other.

*Falces* tolerably long, strong, straight, subconical, vertical.

*Maxillæ* short, strong, excessively bent, and almost meeting over the labium.

*Labium* short, rather pointed at the apex, or of a somewhat subtriangular form.

*Sternum* heart-shaped, drawn out at its hinder extremity, where it is rather broadly and obtusely truncated.

*Legs* short, tolerably strong, 1, 2, 4, 3, furnished with hairs and bristles, and one spine on the femora and one on the tibiæ of the first pair of legs.

*Abdomen* very short broad-oval, tolerably convex on the upperside, which is covered by a glossy coriaceous shield (this, however, may very probably be only a sexual character).

### **Witica talis**, sp. n.

*Adult male*, length 1 line.

*Cephalothorax* a little broader than long, the posterior extremity almost squarely truncated, and gradually narrowing to the caput, the lateral marginal compressions not being very strong nor abrupt. It is of a dark reddish yellow-brown colour, covered with strongish granulosities, each bearing a short bristly hair; looked at in profile the caput and thorax form a strong, pretty regular curve. The height of the clypeus is equal to the diameter of the fore-central eyes.

The *eyes* of the hind-central pair are largest of the eight, the intervals between those of the fore and hinder pairs respectively being about equal to an eye's diameter, and the four form a square, whose fore-side is the shortest. Looking at the eyes as in two transverse rows, these are slightly and about equally curved, the convexity of the curves directed away from each other. Each hind-central eye is at least two diameters distant from the hind-lateral eye on its side.

The *legs* are orange-yellow, the tibiæ and genua of the first and second pairs blackish; the genua of these two pairs are peculiarly formed, being much longer than those of the other legs, strongly and subangularly prominent on the outer side, and narrowest at their articulation with the tibiæ. They are furnished with hairs and bristles, some of the latter tolerably coarse, but none of a spinous character, excepting one near the inner extremity of the femora of the first pair, and another near the base on the inner side of the tibiæ of the same pair; all the femora are more or less granulose.

The *falces* are similar to the legs in colour; they are a little prominent towards their base in front, where they are also rather granulose.

The *palpi* are very short, the radial joint equal in length to the cubital, but stronger, and dilated forwards; the digital joint is large, and furnished with strong bristles; the palpal organs are complex, well developed, and prominent. The palpi are similar in colour to the legs.

The *maxillæ*, *labium*, and *sternum* are similar to the cephalothorax in colour.

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* Nom. propr.: a Gothic Prelate.

The *abdomen* is large, short-oval, broad in front, strongly and regularly convex above, where it is covered with a glossy black coriaceous shield furnished thinly with short fine hairs. The sides and underside are somewhat rugulose, and of a dull hue spotted with deep blackish-brown. The spinners are short and compact, those of the inferior pair strongest.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

"Brushed from foliage in a shady wood-glen near a stream."

This spider is an example of the difficulty of drawing a line between the Theridiidæ and Epeiridæ. In the absence of any note on the point I should conjecture that its snare would be of a geometric character. In the coriaceous covering of the upperside it resembles species of the genus *Ceratina*, Menge.

## EPEIROTYPUS, Cambridge.

### **Epeirotypus brevipes,** Cambridge.

*Epeirotypus brevipes,* Cambr. antèa, p. 134, t. 18. fig. 11 (♀).

The *female* only of this spider was described and figured, *l. c. suprà.*

The *male* is smaller, and measures $1\frac{1}{4}$ lines in length.

In general form, colours, and markings the two sexes are very similar, but the male has the thoracic portion on each side much more strongly humped, making the normal indentation between it and the caput, on either side, much stronger; and there is a peculiarity, most marked in the male, but also apparent in the female, though it escaped notice in the description of that sex, that is, that the legs are articulated to an independent portion of the cephalothorax divided from the convex upperside by a strong indentation, which, however, does not appear to run round the caput, but only round the thorax. The middle of the ocular region is more drawn out forwards and prominent in the male than in the female, and bears great resemblance to that of *Euryopis* and *Laseola*. The palpi are very short, the cubital joint somewhat rounded and nodiform, the radial joint larger, dilated forwards, and somewhat produced at its extremity on the inner side, but with no marked prominence or apophysis; the digital joint is very large, somewhat quadrate at its hinder extremity, and the palpal organs are roundish, simple, but enormously developed, and of immense size. The falces of the male are somewhat transversely rugulose; and the inferior pair of spinners in both sexes are longer and stronger than the superior pair.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*: ♂ & ♀).

Three egg-cocoons accompanied this spider; they bear considerable resemblance in form to those of the European *Ero atomaria*, but the texture of the covering is closer and not so net-like. Mr. Smith has the following note on them, which is of great interest as showing that the spider rather belongs to the Epeiridæ than to the Theridiidæ, in which last family I had placed it before the facts related by Mr. Smith were known to me:—"Found in the forest on rocky land near the river in a hollow in a tree-trunk; the female was in a perpendicular, rather fine-meshed, geometrical web five inches in diameter, the centre drawn back by a line. Just behind it, suspended to a cross-line, were three little acorn-shaped * pale brownish egg-cases; the male was on a line in front."

* Rather of a *pear* than acorn-shape.—O. P. C.

## RHANE*, Thorell (fam. Salticidæ).

### **Rhane munda,** sp. n.

*Adult female*, length 2 lines; length of cephalothorax $\frac{3}{4}$ of a line.

*Cephalothorax* distinctly longer than broad, and broadest at the hinder part of the ocular area, which is distinctly broader than long; the posterior slope begins at the hinder row of eyes and declines at the same pitch as the ocular area slopes forwards to the anterior row; looked at in profile, the cephalothorax therefore forms an isosceles triangle, whose obtuse-angled vertex is made by the two slopes. The cephalothorax is dark reddish-brown in colour, thinly clothed with whitish, adpressed, somewhat scale-like hairs, and a few slender prominent bristly hairs on the ocular area.

The *eyes* of the posterior row form a slightly longer line than those of the anterior row, and the second (or intermediate) row is a little the shortest, and rather nearer to the anterior than to the posterior row. The central eyes of the anterior row are double (or more) the size of the laterals, and the clypeus is obsolete. The eyes of the anterior row form a curved line looked at from above and behind, so that a line drawn close behind the centrals would just pass in front of and touch the laterals. The eyes of the posterior row are about two-thirds of the size of the fore-laterals.

The *legs* are short, moderately strong, 4, 1, 2, 3; the femora of the first pair much incrassated. They are of a pale yellow colour; longitudinally marked on the inner side with a more or less well-defined blackish stripe, and also with a blackish macula or incomplete annulus at the extremity of each joint; the femora of the first pair are also strongly tinged with red-brown on the outer side. The legs are thinly clothed with hairs, and armed with a few spines. The latter are beneath the tibiæ and metatarsi—tibiæ I. three pairs (in two longitudinal rows); metatarsi I. two pairs (in two rows), sometimes an extra spine; tibiæ II. two spines in a longitudinal row; metatarsi II. two pairs. Beneath the terminal tarsal claws is a very slight claw-tuft.

*Falces* small, rather projecting, and of a yellow-brown hue.

*Palpi* short, slender, yellow.

*Maxillæ* and *labium* similar in colour to the falces.

*Sternum* narrow-oval, black-brown.

*Abdomen* oval, obtuse in front, of a darkish brown colour, thinly clothed with short pale hairs, and striped with pale brownish-yellow. Two longitudinal stripes run along the whole length on the upperside, one on each side of the median line, leaving a brown central stripe a little tapering towards the spinners; on each side, near the posterior extremity, the yellow stripe emits two or three oblique lateral lines of the same colour, these also often combining with some other similar oblique lateral lines; each side of the abdomen has also a slightly oblique yellowish stripe, beginning at the fore extremity and running backwards and downwards, followed by another shorter but more oblique stripe. In some examples the brown colour of the abdomen is broken up into short lines and spots, which give it a much more spotted appearance; in these cases the ground-colour might be described as brownish-yellow and the markings dark brown. The genital aperture is of simple but characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## COCCORCHESTES, Thorell.

### **Coccorchestes adjacens,** sp. n.

*Adult male*, length a little less than $\frac{2}{3}$ of a line, or $\frac{1}{20}$ of an inch.

In general form and appearance this spider very closely resembles *Coccorchestes scarabæoides*, Cambr. (*anteà*, p. 121, t. 15. fig. 8). It is, however, smaller, and the cephalothorax is less convex above, and a little narrower in proportion from the front to the line of the hinder slope; the surface also is covered more thickly and evenly with larger pock-marks, and its colour is dark brown and not glossy as in *C. scarabæoides*, nor has it any trace of the purple reflections often conspicuous in that species. The sides of the caput also have the marginal line, when looked at from above, straighter. The anterior row of eyes is

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* The generic name *Rhane* was substituted by Dr. Thorell for *Rhanis*, C. L. Koch, the latter being preoccupied in Coleoptera.

less curved, and the ocular area is rather narrower, *i. e.* the area included by the two lines of the fore, lateral, and posterior eyes. In *C. scarabœoides* this line of the posterior eyes comes nearer the line of the hinder slope than that of the fore-lateral eyes, while in the present spider it appears to be exactly halfway between them. The colour of the legs is pale yellow. The palpi have the radial joint shorter than the cubital, and the apophysis at its termination on the outer side is stronger and longer in proportion than in *C. scarabœoides*. The palpal organs also differ; in the present species they are surrounded by a strongish coiled filiform spine. The upper covering of the abdomen is punctured and black with purple reflections, but not nearly so rich and glossy as in the other species mentioned.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

This very minute Salticid spider is also nearly allied to *C. cupreus*, Sim., as described by G. W. Peckham ('Occasional Papers of the Nat. Hist. Soc. of Wisconsin,' vol. ii. no. 3, p. 169); but Mr. Peckham describes the latter spider as "purple on the thorax," "and brown on the abdomen," whereas these colours in the present spider are exactly reversed. If this is also true of M. Simon's type, this disposes of M. Simon's conjecture that my *C. scarabœoides* and his *C. cupreus* are identical. At any rate, I feel tolerably certain that the present spider is distinct from, though nearly allied to, *C. scarabœoides*, Cambr.

## SIMONELLA, Peckham.

### **Simonella decipiens,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines; *adult female*, length very nearly 3 lines.

The male is entirely of a dull orange-yellow-brown colour, except the posterior extremity of the abdomen, which is pale yellowish; the caput is black, the limits of this colour being well defined and not encroaching at all on the thorax; between the caput and thorax is a very strong transverse constriction, and a slighter one near the abdomen. The legs are slender, and not very long, 4, 3, 2, 1; the tibiæ of the first pair have a black longitudinal line on the inner side. The fore part of the abdomen is connected with the hinder part by a long narrow constricted neck, which enlarges to an oval-shaped hinder extremity. The fore part, as well as the greater part of the hinder extremity, is covered with a kind of chitinous skin. The whole spider's form is thus very narrow, elongate, nodose, and more than usually formiciform. The abdomen of the male has no markings on it, but on that of the female there are several transverse patches on the upperside; the two on the anterior part are dusky yellow-brown, one just behind the constriction is narrow but blackish, well defined, and with a prominent point at the middle of its fore margin, and behind this is another dusky patch narrowing to a point near the spinners. The posterior constriction of the cephalothorax of the female is stronger than that in the male, but that of the abdomen is in the female but slight, the form of this part in that sex being elongate-oval with a slight constriction near the middle, and the upperside of its anterior extremity is covered by a smooth chitinous patch. The palpi of the male are short; the cubital is rather shorter than the radial joint, which has a number of strong hairs on its inner side, and a short obtusely pointed apophysis at its extremity on the outer side; they are yellow-brown in colour, the digital joint darkest, and its length is more than equal to the radial and cubital joints together; the palpal organs are simple, with a black filiform spine round their inner side close to the margin of the joint.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

This spider is nearly allied to *S. americana*, Peckh., but is even more ant-like in its general appearance, and differs in colours and markings, the black caput being better defined, and the male being without any markings on the abdomen.

To show the close resemblance of this spider to an insect of the hymenopterous

order, Mr. H. H. Smith enclosed with it a specimen of an ant beaten from the same bushes on which the spiders were found. No other connection than that of this resemblance appears to have been noted.

## FLORINDA, gen. nov. (fam. Theridiidæ; subfam. Linyphiinæ).

*Cephalothorax* elongate-oval, broad, the lower margin rounded at the fore extremity; a little constricted on the marginal line at the junction of caput and thorax, moderately convex above, the profile of these showing a gradual slope backwards.

*Eyes* unequal in size, in two transverse nearly uniform curved lines or four pairs, the anterior line strongly curved, the convexity of the lower line directed forwards, that of the posterior line, which is nearly straight, directed backwards. The four pairs are well separated, the two central ones forming a trapezoid, whose length is about equal to its width behind, but its fore side much the shortest.

*Legs* rather long, slender, 1, 2, 4, 3, the femora shaped like the drum-stick of a fowl; thinly furnished with hairs, and with a few, not very strong, but distinct spines on the femora, tibiæ, and metatarsi.

*Falces* strong, straight, vertical, a few very minute teeth at their extremity behind the fang, with a largish obtuse tooth on the inner side in front of the fang, and another about halfway above it towards their base on the inner side and pointed (these last teeth may only be sexual).

*Maxillæ* of large size, broad, and inclined to the labium; they are slightly curved but broadly truncate at their extremity, and strongly and abruptly prominent at the middle.

*Labium* short, a little broader than high, rounded at the apex, and transversely impressed below it.

*Sternum* longer than broad, subtriangular, and its posterior extremity drawn out into a longish tapering point between the coxæ of the fourth pair of legs.

*Abdomen* elongate, cylindric, broadly and strongly constricted at the middle, the hinder extremity roundly prominent above, and projecting over the spinners in a somewhat hood-shape (this, again, may be only sexual). Anal tubercle large, prominent, and two-jointed. Spinners short, strong, compact, the inferior pair largest and slightly longest. There is a colulus immediately below the inferior pair of spinners, of considerable size, and consisting of two parts—a basal and a triangular pointed apical portion (the function of this part is unknown, and as yet its value for systematic classification is uncertain; its notice here, therefore, is not meant to imply generic value, though it may be of that significance).

### **Florinda mirifica,** sp. n.

*Adult male*, length $1\frac{2}{3}$ lines.

*Cephalothorax*, *falces*, *maxillæ*, *labium*, and *sternum* reddish-orange-yellow. The cephalothorax has some indefinite converging lines of a darker hue. The height of the clypeus exceeds half that of the facial space.

The *eyes* are on strong black tubercles. Those of the hind-central pair are much the largest, and are separated from the hind-laterals by a diameter's interval or rather more, but from each other by more than two diameters. The fore-centrals are about an eye's diameter apart, and each is separated from the fore-lateral eye on its side by an interval nearly about equal to the length of the line formed by the fore-central pair. Those of each lateral pair are smallest, placed slightly obliquely, and are contiguous to each other.

The *palpi* are moderately long; the radial joint is double the length of the cubital, claviform, and furnished (mostly above at the fore extremity) with some strong bristly hairs; a single somewhat spine-like tapering bristle issues from near the fore extremity above of the cubital joint. The digital joint is not large; it is of a roundish-oval form, a little longer than the radial joint, and furnished with bristly hairs. The palpal organs are well developed and moderately complex. The humeral joints have a few minute teeth or tubercles along their inner side, each furnished with a pair of short minute spines or bristles, as well as some more numerous smaller granulosities.

The *falces* have along their outer surface a series of impressed punctures or minute pock-marks, which

the granulosities and teeth on the humeral joints of the palpi probably traverse and produce some kind of sound or stridulation (so far as I am aware, this peculiar form of stridulating-apparatus has not before been noted). At the extremity of each of the falces towards the inner side is a strong somewhat obtuse tuberculiform prominence or tooth.

The *abdomen* is of a pale dull clay-yellowish colour; it is clothed thinly with hairs, and has a series of strongish folds or ridges in the epidermis on each side a little behind the spiracular openings. The four outer spinners are two-jointed.

*Hab.* Mexico, Cuernavaca in Morelos (*H. H. Smith*).

At the extremity of the coxæ of the legs, in the middle behind, is a strong tapering, but slightly obtuse, toothless prominence; these joints are also very strongly and unusually prominent underneath.

## PHYLLONETHIS, Thorell.

### **Phyllonethis electa,** sp. n.

*Adult female*, length 3 lines; *adult male*, scarcely 2 lines.

*Cephalothorax*, *legs*, and *palpi* of the female pale yellow. A more or less distinct tapering black band extends from the eyes to the hinder margin of the cephalothorax; the edges of this band are somewhat irregular, at times slightly dentated, and in some examples it extends through the ocular area and over the clypeus, in one it is divided or somewhat furcate behind the eyes. The sides of the thorax are more or less distinctly marked with black converging lines or narrow stripes. The legs in some examples are quite devoid of any dark annulations; in others the extremities of the tibiæ of the first and fourth pairs are tinged with brown or black; while some have those parts as well as the extremity of the femora in all the legs distinctly annulated with black, and there is sometimes also a distinct black spot in the middle on the anterior side of the femora. The relative length of the legs is 1, 4, 2, 3, and they are furnished with hairs, and a few slender black mostly erect bristles.

The *eyes* are normal; the four central eyes form very nearly a square, with its width slightly less than its length. The interval between the hind-central pair is equal to a diameter, and nearly double that between each and the hind-lateral eye next to it. The height of the clypeus is greater than half that of the facial space.

The *maxillæ* are long, straight, rounded at the extremities, slightly inclined to the labium, and more than double its length; their colour is black, margined on the inner edge with yellowish.

*Labium* small, black, broader than high, and somewhat semicircular in form.

*Sternum* black, somewhat triangular, and longer than broad.

*Abdomen* large, short-oval in form; the upper part and sides white; the posterior and middle of the anterior parts black, often connected by two longitudinal, converging, more or less distinct, sometimes nearly obsolete, black zigzag lines, leaving when tolerably perfect a central longitudinal dentated narrowing white stripe, whose hinder portion is prolonged without dentation through the middle of the posterior black part to the spinners. Underside black, with an elongate-oval white spot near the middle, and a strong triangular prominence rising up each side near the hinder extremity. Spinners short, compact, and of a dull yellowish colour. Genital aperture small, but of characteristic form.

The male is similar in colours and general markings to the female; the abdomen is small and of a subcylindric-oval form, and the longitudinal zigzag stripes on the upperside are stronger and more continuous. The palpi are moderately long; the humeral joint has a row of long bristles beneath; and the cubital joint has two long prominent ones on its upperside, one near each end. The digital joint is rather large, and has its outer side turned inwards; the palpal organs are directed outwards, these are well-developed and rather complex.

The *falces* are long, rather divergent, and attenuate at their extremity, where the upperside is rugulose, and near their base on the outer side is a pointed somewhat tooth-like prominence.

*Hab.* Mexico, Omilteme in Guerrero (*H. H. Smith*).

*P. electa* is apparently closely allied to *Theridion frondeum*, Hentz, from Alabama, and perhaps still more closely to *T. pictipes*, Keys., from Florida, but is, I think, quite distinct from both.

Mr. Smith sends the subjoined notes on this spider:—"A common species, found in leaves, usually of one kind of bush, which have been drawn into a cone-shape and securely bound by a thick web of silk at the edges; these cones, generally about three inches long, are frequently connected by many long irregular lines to leaves below, forming a kind of web. The spiders sit within the cone, and the white egg-cases are found loosely attached to the leaf within close to the spider. Deserted cones are frequently found on the same bush, as if the spider changed its dwelling from time to time."

### **Phyllonethis adjacens,** sp. n.

*Adult female*, length $1\frac{3}{4}$ lines.

The whole of the fore part (*cephalothorax*, *legs*, *palpi*, *falces*, *labium*, and *sternum*) yellow; the cephalothorax with a broad central well-defined longitudinal black band throughout, which is slightly constricted near the thoracic junction, but scarcely narrower at its posterior than at its anterior extremity.

The *eyes* of the hind-central pair are slightly further apart than each is from the hind-lateral eye on its side. The four centrals form an exact, or almost exact, square.

The *legs* are rather long, slender, 1, 2, 4, 3, furnished with rather coarse hairs, and one or two somewhat spine-like bristles.

The *abdomen* is white, with a broad central black band extending from the fore margin to one-third of its length. This band is well-defined, rather widest and squarely truncate behind; between it and the hinder extremity of the abdomen there are some black spots and short lines, giving an indication of two black dentate or zigzag lines, each ending in a black spot close to the spinners. The underside is dusky blackish, with a diffused irregular white patch in the middle close behind the genital aperture: this last is small, but characteristic in form.

*Hab.* MEXICO, Omilteme in Guerrero (*H. H. Smith*).

*P. adjacens* is nearly allied to *P. electa*, but is much smaller, and differs not only in markings but slightly in the position of the eyes, and very distinctly in the form of the genital aperture.

Mr. Smith has the following note on this spider:—"Found in a small, thickish, irregularly globular web, supporting a number of dried leaves closely bound together, in which the spider was concealed, on the end of a branch six feet above the ground, at the edge of the forest. A small purplish egg-case was found in the bunch of leaves."

## THERIDION, Walckenaer.

### **Theridion jucundum,** sp. n.

*Adult male*, length 2 lines.

*Cephalothorax* yellow-brown, with a somewhat irregular tapering band of a darker hue extending from the eyes to the hinder margin, and some converging lateral lines of the same colour indicating the thoracic segments. A few long bristly hairs are disposed on the ocular area and in the median line of the caput.

*Eyes* in two transverse curved rows, the convexity of the curves directed forwards; that of the posterior row slight, that of the anterior much stronger. The two fore-centrals are seated obliquely on a strongish prominence, and form a slightly longer line than the hind-central pair, the four forming a quadrilateral

figure, whose length is rather greater than its width, and its posterior side rather the shortest; those of each lateral pair are seated slightly obliquely on a tubercle; the interval between those of the hind-central pair is very slightly less than that between each and the hind-lateral eye next to it. The height of the clypeus considerably exceeds half that of the facial space.

*Legs* moderately long, 1, 2, 4, 3, the first pair much the longest, rather slender, yellow, the femora and extremity of the tibiæ of the first pair strongly tinged with orange. Clothed thinly with coarse hairs.

*Palpi* short, slender, excepting the digital joint and palpal bulb, which are of large size. The cubital joint is very short, the radial stronger, and spreading out at its fore extremity; these joints are furnished with a few strong, prominent, bristly hairs; the palpal organs are directed outwards and are greatly developed, but of simple form, forming a kind of double lobe, the longer portion of which has its anterior extremity close beneath the extremity of the digital joint, of a blackish hue, and furnished with a slightly curved tapering black spine. The palpal organs are encircled by a closely adhering black spine round their margin next to the outer surface of the digital joint.

The *falces* are of moderate strength, straight, vertical, tapering, and similar in colour to the cephalothorax.

The *maxillæ*, *labium*, and *sternum* are dull yellow-brown.

The *abdomen* is oval, somewhat cylindric, of a pale dull luteous colour, with a broad dentated, very slightly tapering, dark band speckled with minute spots of a darker colour along the middle of the upperside, and margined with a stripe of cretaceous-looking white spots; the sides are marked with indistinct vertical dark diffused lines; the upperside is covered thinly with coarse hairs.

*Hab.* Mexico, Omilteme in Guerrero (*H. H. Smith*).

This spider is nearly allied to *Theridion eximium*, Keys., and *T. magnificum*, Keys., from the Amazons, as well as to *T. ethicum*, Keys., from Rio Janeiro, but appears to be distinct from each of them.

## EPISINUS, Walckenaer.

### **Episinus bigibbosus,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

In general form and appearance this species is of the normal type. The colour of the cephalothorax is dull orange-yellow, the caput and a longitudinal central line on the thoracic portion slightly suffused with reddish-brown.

The *eyes* are rather closely grouped together, in two transverse curved lines, and form a semicircle; the anterior row is much the most strongly curved. The eyes of the hind-central pair are separated by a diameter's interval, and each is almost contiguous to the hind-lateral eye on its side; those of the fore-central pair are on a strong prominence, and with the hind-centrals form very nearly a square, the anterior side being slightly the shortest. Each fore-central eye is separated from the fore-lateral on its side by less than half a diameter's interval; the fore-laterals are largest of the eight, and those of each lateral pair are contiguous to each other; all, excepting the fore-central pair, are of a pearly-white lustre.

*Legs* rather long, slender, 4, 1, 2, 3 (2 and 3 much the shortest), yellow, faintly annulated, excepting the metatarsi and tarsi, with dull orange-brown, furnished with coarse hairs and, on the tibiæ, with two or three very fine spines.

*Falces* rather small and weak, straight, tapering, and of a yellow colour.

*Maxillæ*, *labium*, and *sternum* yellow, slightly suffused with brown.

*Abdomen* large, narrow at the fore extremity and widening gradually to near the hinder part, where it curves inwards to the spinners. It is of a dull yellowish hue, thickly covered with white cretaceous-looking spots on the sides and upperside, on the latter is an indistinct pattern formed by small black spots and lines; on each side at the widest part is a strong, globular, somewhat tuberculiform, black prominence or gibbosity, its surface marked by a pale cross which divides it into four quarters or spots. The upperside of the abdomen is furnished with coarse hairs and slender spines, and on and near the globular prominences are a few stronger spines of a knife-blade form.

The underside is of a uniform pale yellow, and the genital aperture is of a dark yellow-brown colour and characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## THANATUS, C. L. Koch (fam. Thomisidæ).

### **Thanatus longipes,** sp. n.

*Adult male*, length $3\frac{1}{2}$ lines.

*Cephalothorax* dark yellow-brown, somewhat finely veined on the sides, and narrowly margined with black, and with a broad pale yellow-brown band, a little constricted in the middle, extending along the upperside from the eyes to the hind margin. This band is thickly clothed with coarse white hairs. The clypeus is prominent, and its height considerably exceeds half that of the facial space.

The *eyes* of the posterior row are separated by equal intervals, and the interval between each of the outer eyes of this row and the outer eye of the anterior row on its side is equal; these eyes with the hind-central eye on its side form an isosceles triangle, whose base is half its height in length. The two fore-central eyes are separated by double the interval that divides each from the fore-lateral eye on its side, this last being about an eye's diameter. The four central eyes form a square, whose anterior side is shorter than the rest.

The *legs* are long, 1, 2, 3, 4, of a pale yellow-brown hue, thickly mottled and speckled with dark brown, furnished thinly with hairs and fine spines, and a thin scopula beneath the tarsi and the anterior portion of the metatarsi.

The *palpi* are moderately long, similar to the legs in colour; the radial and cubital joints are of very nearly equal length, the latter has a short, stoutish, pointed dark red-brown apophysis at its fore extremity on the outer side, and an obtuse one beneath it. The digital joint is of a narrow-oval form, and about equal in length to the radial and cubital joints together. The palpal organs are simple, consisting of an oval lobe, with a short black spine at their extremity.

The *maxillæ*, *labium*, and *sternum* are similar in colour to the legs, the sternum being more coarsely and thickly speckled with deep brown, forming a longitudinal central and a lateral marginal stripe.

The *abdomen* is oval, of a mottled yellow-brownish colour, furnished with hairs, of which a few are coarser than the rest and black; a longitudinal tapering dark brown band occupies the middle of the upperside, and is produced in a somewhat broken form to the hinder extremity; the fore end of this band does not quite reach the fore margin of the abdomen; and on each side of its hinder extremity are three black spots forming a rather conspicuous curve, whose convexity is directed outwards. On the underside are two curved longitudinal indefinite dark brown lines enclosing a long pointed oval space. Spinners short and compact.

*Hab.* MEXICO, Omilteme in Guerrero (*H. H. Smith*).

## CLUBIONA, Latreille.

### **Clubiona crocota,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines; *female*, $3\frac{1}{4}$ lines.

In general form and appearance this spider is of the ordinary type. The whole of the fore part of the male is of a pale orange-yellow colour, and the abdomen is of a more luteous yellowish hue.

The *eyes* are of nearly uniform size and all pearly-white; they occupy the whole width of the upperside of the fore extremity of the caput. The posterior row, looked at from above and slightly behind, is straight; the anterior row curved, the convexity of the curve directed forwards; looked at from in front the posterior row appears well curved. The interval between the hind-central pair is equal to nearly two diameters, while that between each and the hind-lateral eye on its side is not much more than one diameter, and a similar interval separates each of the hind-central pair from the fore-central eye opposite to it. The four central eyes form a trapezoidal whose posterior side is the longest and its anterior side the shortest, the

outer sides being rather longer than the anterior side. The height of the clypeus is about equal to half the diameter of the fore-central eyes.

The *legs* are of moderate length and strength, 1, 4, 2, 3, furnished thinly with hairs, and armed with some long and strongish spines. Beneath the tarsal claws is a claw-tuft, which is of a denser and more pad-like form on the third and fourth pairs.

The *palpi* are moderately long, furnished with longish hairs and some slender bristles, and four spines ($\frac{3}{1}$) on the upperside, near the fore extremity of the humeral joint. The radial joint is half as long again as the cubital, and furnished on the inner side with some strong, pale, bristly hairs; it is of a curved form, and has at its anterior extremity on the outer side a long, strong, nearly straight apophysis, rather narrower in the middle than at the extremities, and nearly equal to the joint in length; this apophysis ends in a strongly emarginate or furcate form; the posterior limb of the fork is stronger than the anterior, and obtuse, the anterior being rather sharp-pointed. The digital joint is rather large, broadly truncate in form at its extremity, rather densely furnished with pale bristly hairs. The palpal organs are of great size, consisting chiefly of a large, flattish, somewhat circular, and on one side convex, prominent lobe, concave beneath, with a strong corneous process within the concavity; the margin of this lobe is bounded by a closely-fitting, tapering, red-brown spine.

The *falces* are tolerably long and of moderate strength, straight, but projecting forwards and slightly divergent towards their extremity; they have, towards the base in front and on the sides, a few minute red-brown granulosities and bristly hairs—some also of the latter at their extremities, where there appear to be no teeth in opposition to the fang, which last is strong, slightly curved, and tapering.

The *maxillæ*, *labium*, and *sternum* are normal.

The *abdomen* is of a narrow, elongate-oval, somewhat cylindrical shape, clothed with coarse as well as pale silky hairs. The spinners are rather long, those of the superior pair longer than the inferior pair by the length of their second or terminal joint.

The female is larger than the male, but similar in colour and other general characters, but the intervals between the eyes are greater. The genital aperture is large, of a characteristic somewhat quadrate form, and of a dark red-brown colour.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## **Clubiona attigua,** sp. n.

*Adult male*, length $2\frac{2}{3}$ lines.

*Cephalothorax* normal in form, colour dull orange-yellow, clothed thinly with whitish-pubescent hairs, the normal grooves a little darker.

*Eyes* on black spots in two transverse rows, the posterior row straight, the anterior with its slight curve directed forwards; the two forming an exact segment of a circle—those of the hinder row and the fore-laterals are subequal, but larger proportionately than in most of the European species of this genus, the fore-central pair being much the smallest, and separated by slightly less than a diameter's interval, each being equally separated from the fore-lateral eye on its side. The eyes of the hinder row are equally separated from each other. Those of each lateral pair are near together, but not contiguous. The height of the clypeus is rather greater than the diameter of the fore-central eyes.

*Legs* tolerably long, 1, 4, 2, 3—1, 4, and 2 being subequal, moderately strong, armed with longish spines and a few hairs. Terminal tarsal claws springing from a small claw-joint, and furnished with a strong compact claw-tuft. Colour orange-yellow.

*Falces* long, strong, nearly straight, but divergent and projecting forwards, of an orange-yellow-brown hue, furnished in front with numerous bristly pale hairs; they are a little hollowed near their extremity on the inner side, near which and below the inner margin are several short strongish teeth, and strongly prominent underneath, with a transverse ridge armed with two teeth near the extremity of the maxillæ, and numerous long, strong, bent bristles directed inwards; also at the fore extremity on the inner side is a strong obtuse (rounded at the end) prominence, close to the insertion of the fang.

*Palpi* moderate in length and strength, yellow, digital joint yellow-brown. The humeral joint has, towards its fore extremity above, three black spines, 1, 2; the cubital joint is scarcely half the length of the radial and has a black bristle directed forwards on the upperside from each extremity, the anterior one being

of great length, about $1\frac{1}{2}$ times the length of the joint; the radial joint is slightly clavate, prominent beneath the fore extremity, and furnished with long bristles, those near the base on the upperside being almost spines, at its extremity on the outer side is a short but tolerably strong apophysis, whose hooked, obtuse, and somewhat bifid point is directed backwards. Palpal organs simple, consisting of a convex bulb with two corneous projections beneath their fore extremity.

*Maxillæ* long and strong, straight, enlarged at their extremity, where they are obliquely truncated on the inner side, and furnished there densely with hairs; inner margin greatly excavated, forming a kind of domed niche over the labium. They are a little paler in colour than the falces.

*Labium* half the length of the maxillæ, rather narrower at the apex than at the base, a little way above which the margins are sharply indented; apex strongly emarginate, and furnished with a row of converging black bristles. It is similar to the maxillæ in colour.

*Sternum* heart-shaped, ending posteriorly in an obtuse rounded point between the coxæ of the fourth pair of legs. Colour like that of the legs.

*Abdomen* narrow-oval, of a dull luteous-yellow colour, clothed thinly with pale hairs and a few dark bristles; the spinners are tolerably long, those of the inferior pair shorter but stronger than the superior, and of an elongate subconical form. Colulus short, broad, and truncate.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## TEMECULA *, gen. nov. (Dictynidæ).

Allied to *Amaurobius*, C. Koch, but differs notably in the relative size and position of the eyes, as well as in some other points of structure.

*Cephalothorax* oval, much longer than broad; caput broad, quadrate, with the fore corners rounded off; sides parallel; profile even, gradually sloping on thorax, rounded or convex on caput. Normal indentations of thorax very slight.

*Eyes* in two transverse very nearly straight lines, occupying the greater part of the width of the caput, the posterior row longest; unequal in size; the fore-laterals much the largest, the fore-centrals much the smallest, the difference between them being very considerable. The latter much nearer together than to the former, and a similar position also between the eyes of the posterior row. The interval between the eyes of each lateral pair is equal to the diameter of the hind-lateral eye.

*Legs* moderate (subequal) in length and strength; 1, 4, 2, 3, furnished sparingly with spines on those of the 1st, 2nd, and 4th pairs, chiefly beneath the tibiæ of the 1st pair.

*Maxillæ* strong, slightly inclined towards the labium, broader at the extremities than at the middle, where they are broadly but not strongly impressed in a transverse direction; extremities rounded.

*Labium* nearly double of its width in length, rather more than half that of the maxillæ, oblong, rounded at the apex.

*Sternum* broad-oval, rather truncate at the fore extremity.

The four exterior spinners moderate and equal in length, the anterior pair strongest, those of the supernumerary pair distinctly separated from each other.

### Temecula mexicana, sp. n.

*Adult male*, length $2\frac{1}{2}$ lines.

*Cephalothorax* dark brown, the normal grooves and indentations slightly darkest; furnished thinly with coarse pale hairs; height of the clypeus equal to the diameter of one of the fore-lateral eyes.

*Legs* dull yellowish-brown, femora black-brown; well furnished with hairs; spines few and slender, mostly beneath the femora of the first pair.

*Palpi* yellowish-brown; humeral joint blackish-brown, not very long. Cubital joint very short above, rather towards the inner side produced into a strong, subconical, pointed projection, which is equal to the joint in length, and directed inwards; radial joint also very short, but much produced on the inner side, with a strong tuft of black bristly curved hairs on the outer side; digital joint large, with a strong obtusely pointed

* Nom. propr.

lobe at its base on the outer side, well clothed with coarse hairs. Palpal organs prominent and well-developed but simple, consisting chiefly of a large roundish corneous lobe, with an inconspicuous fine black tapering spine beneath their fore extremity.

*Falces* long, moderately strong, straight, and of a dark slightly reddish-brown colour.

*Maxillæ*, *labium*, and *sternum* deep blackish-brown, the two latter having their extremities of a pale brownish-yellow hue.

*Abdomen* rather small, oval, blackish, clothed thinly with coarse hairs. Spinners deep brown, with pale tips.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

"Found under a stone in a dark wood."

## DICTYNA, Sundevall.

### **Dictyna parietalis,** sp. n.

*Adult male and female*, length 1½ lines. (A slight variation from this, both in respect to deficiency and excess in different individuals.)

*Cephalothorax* considerably longer than broad, lateral marginal indentations at the caput very strong; thorax almost circular; marginal profile of caput (looked at from above and behind) prominent in the middle; caput (especially the occiput) much elevated above the thoracic level. Colour dark yellow-brown, the normal indentations clearly defined by converging blackish bars. The upper part of the caput is thinly clothed with coarse white adpressed hairs, arranged in 3–5 longitudinal lines.

*Eyes* in normal position; the four centrals form a quadrangle whose posterior side is slightly longer than the anterior side. The interval between those of the hind-central pair is rather over an eye's diameter, and much less than that between each and the hind-lateral eye next to it. The fore-laterals are largest, and the fore-centrals, which are the smallest, are half the distance from them that those are from each other. The height of the clypeus, which is rather prominent below, is rather greater than half that of the facial space, and it has on it some pale spine-like bristles on either side directed inwards.

*Legs* rather short, not greatly unequal in length, moderately strong, 1, 4, 2, 3; uniform pale yellow in colour, furnished with coarse whitish and other hairs only.

*Palpi* short, similar to the legs in colour. Cubital and radial joints short, the cubital strongest; the outer side of the latter is protuberant, ending with a black serrate-edged corneous prominence, somewhat obliquely truncated, and near it are some minute tubercles bearing short bristles. The radial joint has a prominence in front at the base towards the inner side furnished with bristly hairs, terminating in a small corneous point. The outer side of the radial joint is also strongly and obtusely prominent, and furnished with a few minute tubercles and bristly hairs in an encircling line. The digital joint is large, oval, somewhat produced at its extremity, with a small protuberance at its base on the outer side. Palpal organs prominent, consisting of a large oval lobe, with a twisted corneous process at their posterior extremity pointing beneath the radial joint.

*Falces* long, strong, of normal form, very prominent at their base in front, upturned and divergent at their extremity, greatly excavated and hollow on their inner side; at the base on the outer side in front is a strong obtusely prominent process, directed downwards and outwards. On the front of the falces are numerous granulations or minute tubercles and impressed points or pock-marks. The fangs are minutely serrated on their inner margins. Falces similar in colour to the cephalothorax.

*Maxillæ* and *labium* normal; similar to the fangs in colour or paler.

*Sternum* yellowish, a little darker than the legs, broad-oval, truncate before, and with its posterior extremity drawn out into a short obtuse point between the coxæ of the fourth pair of legs. It is very convex and covered with numerous coarse erect pale hairs.

*Abdomen* oval, of a dull luteous hue, covered pretty thickly with minute cretaceous white spots, and clothed rather densely with white and black hairs intermixed, the latter being of a flattened somewhat narrow lanceolate form. On the fore part of the upperside is a longitudinal central black triangular marking, strongly constricted or indented in the middle on each side, almost dividing it into two parts; from the middle of the posterior margin is a small prominent point directed backwards, giving it a cruciform shape.

Following this, on either side of the median line, is a zigzag or angulated blackish stripe, the two rather converging backwards, and formed by what remains of the normal transverse angular lines or chevrons; in some specimens these are mere spots. The sides and underside are thickly clothed with coarse white hairs, and obscurely spotted or marked with blackish. Spinners normal.

The female resembles the male in colours and markings. The genital aperture is much obscured by pale hairs, but is of characteristic though simple form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith has the following note on this species:—"On the white-washed clay walls of our verandah the web is an irregular net spread flat against the wall; often more or less radiating in form, and from half an inch to two or three inches in diameter. Small insects alighting on the wall are caught in these webs, which in many places quite cover the surface of the wall. The spiders conceal themselves under thick parts of the web, or behind insects that have been caught; in several instances I found two females close together. The males were in similar webs. The egg-cocoons attached to the wall near the webs are lenticular, or flat on the side next the wall, and convex on the other side, white, pretty thick, and strong, and about as large as the spiders themselves."

This account is of much interest, as it details quite a different habit of life from that of the European species of this genus. A cocoon accompanying the spiders contained only nine or ten eggs.

**Dictyna grandis,** sp. n.

*Adult female*, length $3\frac{2}{3}$ lines.

*Cephalothorax* much longer than broad, but generally of normal form. Colour dark brown, with a broad central longitudinal yellowish band from the eyes to the thoracic junction. This band, as well as the sides of the upper part of the caput, the ocular area, and clypeus, is densely clothed with coarse white adpressed hairs, and a dark brown longitudinal dash shows on either side past the occiput; the thorax has also a marginal yellow border clothed with white hairs.

*Eyes* normal; the central quadrangle rather broader than long, and its anterior side slightly narrower than the posterior.

*Falces* deep brown, clothed with coarse white hairs at their base in front.

*Palpi* yellowish, clothed with coarse white hairs, except the digital joint, which has brown hairs.

*Legs* short, tolerably strong, 1, 2, 4, 3, dull brownish-yellow, obscurely banded with brown, and densely clothed with white and brown hairs only. The profile line of the metatarsi of the fourth pair is distinctly hollow; and the calamistrum extends very nearly from end to end.

*Maxillæ*, *labium*, and *sternum* normal, of a dark brown colour, the latter clothed with coarse white hairs, most densely on the margins.

*Abdomen* large, of a regular oval form, obtuse at each end, densely clothed with short white and brown hairs. It is of a dull luteous colour, with a large dark brown, oblong-oval, longitudinal marking on the fore half of the upperside, margined with whitish, and its posterior extremity somewhat bifid; this is followed towards the spinners by two pairs of oblique dark brown lines, their obliquity being directed inwards and backwards; between them and the spinners is a dark brown patch tapering from its fore end to the spinners, a whitish stripe runs on each side longitudinally through the oblique lines and along the margins of the succeeding brown patch; the sides are suffused with brown, darkest near the hinder part, and obscurely spotted with brown. The underside has a broad deep brown central longitudinal band running from the spinners to the genital aperture, and has a whitish marginal border. The genital aperture is inconspicuous, but of characteristic form. Anal tubercle large, and clothed above with coarse white hairs.

*Hab.* Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

This is the largest spider of the genus I have yet seen.

## TRICLARIA, C. L. Koch.

### **Triclaria habilis,** sp. n.

*Adult male*, length 4–4⅔ lines.

*Cephalothorax* yellow-brown, with an olive-greenish tinge. A longitudinal darker yellow-brown band (dentated on its outer margin) on each side of the median line, and also a narrow, dentated, marginal band on each side; the interval between these is a strongly zigzag pale yellow-brown submarginal stripe; immediately behind the eyes are four short dark yellow-brown parallel dashes or short lines, followed by a transverse, somewhat oblong patch of the same joining in with the thoracic indentation. Ocular area dark, nearly black, clothed with grey hairs.

*Eyes* normal in general position and size. The quadrangle of the four centrals is distinctly broader than long, and its fore-side is shortest. The interval between the hind-central pair is less than two diameters, each being at least two from the hind-lateral eye on its side. The fore-central pair are nearly a diameter's distance from each other, and about half the distance from the fore-laterals. Each hind-lateral eye is placed on the outer side of a strong tubercular prominence. The height of the clypeus is equal to a little more than the diameter of one of the hind-central eyes, being less than one-third of the height of the facial space.

*Legs* long, moderate in strength, 2, 4, 1, 3, similar to the cephalothorax in colour, more or less annulated with darker yellow-brown on the femora and tibiæ, furnished with hairs and longish slender spines, without scopula; the superior terminal tarsal claws have five teeth on the inner side of the basal half, the inferior claw is small. In this spider the tarsal claws appear to spring from a supernumerary (or claw) joint of rather unusual size. This may have also been the case with the next species (*T. extensa*, p. 174), but if so the density of the hairy clothing concealed it. The tarsi are very long, cylindric, and characteristically elastic, those of the fourth pair distinctly longest.

*Palpi* similar to the legs in colour, marked, but not very definitely, with dark yellow-brown; the digital joints are also dark yellow-brown. The humeral joint has a few short strong spines on the upperside; the cubital joint is somewhat clavate, rather shorter than the radial, and has a long, strong, tapering spine at its fore extremity on the upperside. The radial joint has two or three similar spines on its upper surface, with numerous long, pale, coarse, grey hairs on the fore part and outer sides; it has also a strong somewhat angular prominence at its anterior extremity beneath, and a strongish but not very long, dark reddish-brown, flattened truncated apophysis, with a strong spiny point behind near its fore extremity on the outer side; and in front of it, close to the hinder part of the palpal organs, is another, less broad, yellow-brown apophysis, bifid at its extremity. The digital joint is about one-fourth longer than the radial, densely clothed with hairs, and has three (or more ?) elongate-oval, strong, tapering spines towards its base on the inner side. The palpal organs are simple; they consist mainly of some strong corneous lobes and spiny projections, and reach to about one-third of the length of the joint from its fore end.

The *falces* are moderately long, strong, greatly and roundly prominent in front, the profile forming a very strong curve. Colour yellow, suffused with a darker hue on the outer sides. Fangs strong, curved; at the extremity of the falx on the inner margin are two strong teeth of equal or nearly equal length, meeting the fang when closed.

*Maxillæ* and *labium* normal. Colour yellow or pale yellow-brown, the latter suffused with darker yellow-brown towards the base.

*Sternum* as broad as long, *i. e.* not reckoning the posterior extremity, which is considerably produced into a tapering but obtuse point between the coxæ of the fourth pair of legs. Colour pale yellow.

*Abdomen* short-oval, somewhat truncated before. Colour dark blackish-brown above, with a broad yellow-brown central longitudinal marking, pointed at its hinder extremity; on the fore half this has a black-brown margin edged outside again with pale yellow-brown, and is followed towards the spinners by a series of three somewhat curved but broken transverse pale yellow-brown lines; the sides and underside are pale yellow-brown, the former marked with fine, but irregularly-parallel longitudinal blackish striæ

or fine lines; spinners short, compact, and of equal length, at least those of the superior and inferior pairs. The abdomen is clothed, but not densely, with fine hairs.

The female resembles the male in general appearance, colours, and markings; length from 5 to 6 lines; genital aperture (if indeed the specimens examined were adult) exceedingly minute and inconspicuous.

*Hab.* GUATEMALA, Cahabon, and between Dolores and Chapallal (*Sarg*); COSTA RICA (*Sarg, Rogers*).

This species may be easily distinguished from *T. extensa* by its much smaller size, as well as by the different structure of the palpi and palpal organs.

## **Triclaria extensa,** sp. n.

*Adult male*, length 8 lines; length of cephalothorax $4\frac{1}{2}$ lines, breadth of cephalothorax 4 lines.

The *cephalothorax* is rather longer than broad, flattened, and the profile is level to the hinder slope; clypeus broad, prominent, and squarely truncate at its lower margin, its height being equal to half that of the facial space; lateral marginal constriction at the caput rather slight. It is yellow-brown in colour, clothed with short fine hairs and with darker converging stripes or broad dashes; just behind the ocular area are two longitudinal short tooth-like dark brown tapering markings; ocular area deep black-brown.

*Eyes* in two transverse curved rows, the convexity of the curves directed forwards, the posterior row greatly the longest and most curved. The quadrangle of the four central eyes is a little broader than long, and the anterior side shortest. The eyes of the posterior row are much the largest, and subequal; the fore-laterals much the smallest. The interval between the fore-centrals is not much more than half a diameter, and each is separated by half that interval from the fore-lateral next to it. The interval between the hind-centrals is about two-thirds of a diameter, and each is about double that distance from the hind-lateral next to it, the interval between the hind-central and fore-central eyes is about three-fourths of a diameter of the former. The position of the eyes is thus very like that in the genus *Dolomedes*, Latr.

*Legs* of great length, subequal, tolerably strong, and tapering, 2, 4, 1, 3. The greater length of the fourth pair is caused by the extra length of the tarsi. The actual length of the legs is $37\frac{3}{4}$, 36, $32\frac{1}{3}$, and $29\frac{1}{3}$ lines. They are of the same colour as the cephalothorax, without (or with scarcely) a trace of darker annulations, armed with numerous long, tolerably strong spines, on all excepting the tarsal joint, and pretty thickly clothed with hairs, most of which are long, slender, and divergent, amounting beneath the tarsi to a scopula. Tarsi long, slender, cylindrical, and curling up as if multi-articulate, after preservation in spirit of wine; tarsal claws three, the superior pair long, rather strong, strongly curved, and armed on the posterior half with 5–6 denticulations; the inferior claw springs from a kind of prominence beneath the joint, but it does not appear to be a distinct claw-joint.

*Palpi* moderately long, similar in colour to the legs (excepting the digital joint, which is brown-black), and furnished with spine-like bristles and long coarse hairs, longest and densest on the digital joint; radial joint longer than the cubital joint, but not greatly so, its fore extremity underneath is rather incrassated, at its extremity on the outer side is a black-brown, shining, corneous-looking, prominent apophysis, somewhat bent, tapering to the middle and thence enlarging a little to a bluff termination on the outer side and a short bluntish beak-like prominence on the inner side. A little in front of and underneath this apophysis is another, more red-brown in colour, much broader and stronger, and deeply emarginate or bifid at its extremity. Digital joint almost as long as the radial and cubital joints together, of an elongate-oval, drawn out at its fore extremity. Palpal organs not very prominent nor complex, placed beneath the posterior half of the joint.

*Falces* long, powerful, straight; profile strongly convex; colour deep blackish-brown.

*Maxillæ* moderate in length and strength, straight, rounded on their outer, and obliquely truncated on their inner extremity, narrowest across the middle, placed rather widely apart, and of a deep yellow-brown colour.

*Labium* rather higher than broad, about half the length of the maxillæ, truncate at the apex, and similar in colour to the maxillæ.

*Sternum* equal in length and breadth; the posterior extremity produced into a fine sharp point at the inner

corners of the base of the coxal joints (of the fourth pair of legs), which are contiguous at this point. Colour pale yellow.

*Abdomen* oval, somewhat truncate before, moderately convex above. Colour brown, with an indistinct dull yellowish marking along the middle of the fore part of the upperside, broader at the hinder than at the anterior extremity, and somewhat trifid behind. The abdomen is densely clothed with longish prominent fine hairs. The underside is of a paler colour than the upper.

*Hab.* GUATEMALA, Rokminhá (*Sarg*).

Mr. Sarg notes of this spider, that with others of the species it was observed on the face of the rocks in and along the borders of a river, and that when disturbed instead of running up the rocks they ran across the water as if they were on dry land. It was not easy to capture them, and when this was attempted the spiders defended themselves, biting their captor with a slightly irritating effect. Mr. Sarg speaks of the legs as being of a dull yellow-ochre colour, and faintly banded with brown. This habit of taking to the water corroborates the affinity, evidenced by the structure, to *Dolomedes*.

## AGELENA, Walckenaer.

### **Agelena nova,** sp. n.

*Adult male,* length $2\frac{3}{4}$ lines.

*Cephalothorax* of normal form, yellow-brown in colour, margined with a black line, and with a broad well-defined lateral band on each side of a darker yellow-brown, crossed by curved converging lateral blackish lines marking the position of the normal indentations.

*Eyes* in the normal positions. The fore-laterals largest, the fore-centrals smallest. The quadrangle of the four central eyes is as long as broad, but narrowest in front. The interval between the hind-central pair is less than a diameter, and between each of them and the lateral eye on its side about a diameter, that between the fore-central pair is less than half a diameter. The height of the clypeus is greater than half that of the facial space.

*Legs* moderately long, subequal, 4, 1, 2, 3, furnished with hairs and slender spines. Colour similar to that of the cephalothorax, the tarsi being rather paler. They are annulated, most strongly on the femora, with dark brown, the tarsi and metatarsi being immaculate.

*Palpi* rather short, pale yellow-brown marked with blackish; the radial and digital joints darker yellow-brown. The humeral joint has two strongish spines in a longitudinal line on the upperside towards the fore extremity; the cubital joint has a single longer one. The radial joint is stronger, and double the length of the cubital; it has a strong, somewhat bent, hollow and truncated apophysis rather on the outer side of its hinder extremity, and within the hollow there are some bristly hairs and a strongish spine; there is also at the fore extremity rather underneath on the outer side a shorter, strongish obtuse apophysis, with a corneous point at its extremity underneath; on the inner side of the joint, in a longitudinal line, are also two long, strong, tapering spines. The digital joint is large, broad-oval, its fore extremity rather pinched in and a little produced; it is clothed with strong hairs and several spines, less strong than those on the radial joint. Palpal organs moderately complex, compact.

*Falces* long, strong, straight, vertical, similar to the cephalothorax in colour.

*Maxillæ* rather short, broad, truncated at their extremity on the outer, and rounded on the inner side. Colour yellow-brown.

*Labium* broader than high, broadest at the apex, where it is squarely truncated. Colour dark yellow-brown.

*Sternum* broad-oval, hollow-truncate before; its posterior extremity produced into an obtuse point between the coxæ of the fourth pair of legs. Colour yellow-brown, suffused strongly with blackish-brown on the sides, and with some indistinct converging lines of the same colour.

*Abdomen* somewhat oblong in form, broadest at its hinder extremity; yellow-brown marked with blackish,

forming an indistinct pattern of a large yellow-brown oblong area in front, trifid at its hinder extremity, followed by three angular yellow-brown bars or chevrons; the whole abdomen, however, has a minutely mottled or spotted yellow-brown and blackish appearance. Spinners of superior pair long and upturned; colour yellow-brown. Underside dull luteous, marked obscurely with blackish.

*Hab.* GUATEMALA, Vera Paz (*Sarg*).

## ZOROCRATES, Simon.

### Zorocrates mistus, sp. n.

*Adult male*, length 4 lines; *female*, 4½ lines.

*Cephalothorax* yellow-brown, with a broad well-defined dark yellow-brown longitudinal band throughout on each side, and a tapering dark linear central stripe from the middle posterior eyes to past the thoracic junction, bisecting the central yellow-brown band—(in the male) a dark brown line also runs rather obliquely a little way backwards and outwards from each of the hind-central eyes.

*Eyes* normal. The quadrangle of the four centrals is longer than broad, and rather narrowest in front. The interval between the hind-centrals is equal to a diameter, and is considerably less than that between each and the hind-lateral on its side. The fore-centrals are near together but not contiguous, and about double the distance from the fore-laterals. Height of the clypeus rather less than double the diameter of the fore-central eyes.

*Legs* normal, 4, 1, 2, 3, yellow-brown, the femora of the male obscurely banded on the outer side with dusky brown, a thin scopula beneath the tarsi and metatarsi; a peculiar calamistrum on the outside at the posterior end of the metatarsi of the fourth pair of legs in the female. Terminal tarsal claws 2, strongly and closely denticulate. Spines beneath the tibiæ of the first and second pairs of legs arranged in four pairs, beneath the metatarsi of the first pair of legs three pairs, and of the second two pairs.

*Palpi* moderate in length, similar to the legs in colour, excepting the digital joint, which is dark yellow-brown. The radial and cubital joints are of equal length. The former has at its fore extremity on the outer side a strongish prominent apophysis tapering to its extremity, which is obtuse and bent in a kind of hook form, and has one or two small somewhat tooth-like prominences on its fore margin. Outside the radial joint, rather underneath, is a group of strong hairs, and the underside is furnished with others, some of a strong bristly nature, two strongish spines near the base, and another towards the fore extremity. Digital joint very large, oval, densely clothed with hairs, its fore part rather bent downwards. Palpal organs very prominent, not very complex, but composed of several strong corneous processes, of which the strongest is at their base and projects backwards.

*Falces* rather long, moderately strong, straight. They are yellow-brown in colour, furnished with bristly hairs.

*Maxillæ* rather long, strong, slightly rounded at their extremity on the outer, and obliquely truncated on the inner side, a little inclined to the labium, and constricted as well as impressed slightly in a shallow form across the middle. Colour dull pale yellowish.

*Labium* longer than broad, hollow-truncate at the apex, which is pale yellowish, the rest dark brown.

*Sternum* broad-oval, with a slightly prominent obtuse point at the posterior extremity, just in front of the base on the inner side of the coxæ of the fourth pair of legs. Colour pale yellowish.

*Abdomen* yellow-brown, marked with dark brown, but the pattern was too much obscured, by its having become much shrunken, to be able to trace it. Spinners short, compact, with a narrow transverse mammillary organ or cribellum in front of the ordinary spinners.

The female resembles the male in general appearance and colours; but the tibiæ, tarsi, and metatarsi of the legs, especially of the first two pairs, are dark yellow-brown, and the sternum is darker and is marked with some dark oblique lines on the hinder part converging to the middle. The genital aperture is rather large, of a somewhat subtriangular and characteristic form.

*Hab.* MEXICO, Omilteme in Guerrero 7000 to 9000 feet (*H. H. Smith*).

This species may be easily distinguished from the type of the genus (*Z. fuscus*, Simon) by its much smaller size and different colour. From its possessing a

calamistrum and the correlated additional spinning-organ (cribellum) it is separated widely by M. Simon from *Agroeca*, with which its generic characters appear to ally it most closely.

## SPARASSUS, Walckenaer.

### **Sparassus minax,** sp. n.

*Adult male*, length $4\frac{2}{3}$ lines; breadth of cephalothorax slightly over $2\frac{1}{3}$ lines, length of cephalothorax slightly over $2\frac{1}{3}$ lines. *Adult female*, length $6\frac{1}{3}$ lines; length of cephalothorax $2\frac{1}{2}$ lines, breadth of cephalothorax $2\frac{1}{2}$ lines.

*Cephalothorax* in the male very slightly broader than long; in the female the length and breadth appear to be equal. Caput short, lateral marginal impression at the junction with the thorax moderate. Convexity moderate, profile evenly curved; height of the clypeus rather less than the diameter of the fore-central eyes. Colour dull orange-yellow, marked and veined in a scratchy way, but not strongly, with red-brown, showing the position of the normal indentations. A few short bristles on the upper part of the caput and clypeus.

*Eyes* rather small, subequal, those of the hind-central pair slightly the smallest. The curves of the two rows are not strong; that of the anterior row strongest and directed forwards, that of the posterior row directed backwards. The interval between the fore-central pair is equal to a diameter, and that of each of them from the fore-lateral eye on its side is about one-third of that interval. The quadrangle of the four centrals is as broad as long, the anterior side a very little shortest. The interval between those of the hind-central pair is equal to two diameters, and is slightly greater than that between them and the hind-laterals.

*Legs* long, tolerably strong, 2, 1, 4, 3. Colour similar to that of the cephalothorax, obscurely spotted with small dusky reddish-brown points. They are armed with moderately long and strong spines, and a compact scopula beneath the tarsi and metatarsi, which, however, does not extend nearly to the hinder extremity of the latter. Beneath the tarsal claws is a claw-tuft; the tarsal claws are strongly toothed—apparently 9 or 10 denticulations.

*Palpi* rather short, similar to the legs in colour. The humeral joint has four short strong spines near its fore extremity, two in a longitudinal line in the middle, and one on each side. Cubital joint short, cylindric. Radial joint a little longer, stronger than the cubital, very prominent on its outer side, terminating in a short, strong, sharp-pointed spine directed downwards and forwards, and forming a strong hook; between this and the inner side of the anterior margin of the joint is a very long, rather sinuous, tapering, sharp-pointed corneous, or spine-like, apophysis directed forwards, whose length is considerably greater than the length of the joint, which is also well furnished with long, coarse, bristly hairs, and has a long strong spiniform tapering bristle directed forwards from near its base on the inner side. The digital joint is large, of a somewhat cylindric-oval form; it has a small truncated prominence at its base on the inner side and is longer than the radial and cubital joints together, and thickly clothed with hairs. Palpal organs well developed but simple in structure.

*Falces* moderately long, powerful; cut away on their inner extremity, where the coarse hairs are so thick as to make it impossible to see what denticulation, if any, they may have; they are like the cephalothorax in colour, with two (a long and a short) longitudinal dark brown lines in front, and have a few short bristles in front also.

*Maxillæ* short, strong, straight, of an oblong form, rather rounded at the extremity, where near the inner side are numerous closely-grouped hairs and strong divergent pale brown bristles.

*Labium* small, broader than long, rounded at the apex, where it has some strong black bristles.

*Sternum* broader than long, subtriangular, and (with the maxillæ and labium) of a yellow hue.

*Abdomen* oval, rounded behind, truncated before, of a pale yellow-brown colour, paler along the middle of the upperside, marked, on the sides especially, with minute red-brown spots; two red-brown lines form an elongate tapering marking along the middle of the fore half, and this is followed by a series of angular red-brown lines or chevrons nearly to the spinners. The underside has a broad, central, longitudinal dark reddish-brown band, narrowly margined with yellowish. The spiracular plates are yellow, with the inner margins dark reddish-brown. Spinners small, short, and compact.

The female resembles the male in colours and markings. The maxillæ are more squarely truncated at the extremity, and have some flattish disc-like tubercles on the outer sides ringed with black, and a prominent spine-like bristle springing from each. The basal half of the labium is dark brown; at the inner side of the extremity of the falces are numerous, very long, strong coarse hairs covering the fangs and meeting those directed towards them from the inner extremities of the maxillæ. The sternum is yellow, thinly spotted with reddish-brown. Abdomen broad-oval; convexity moderate; genital aperture conspicuous and of very characteristic form. The falces have also each towards their extremities on the inner side a band of disc-like tubercles like those on the maxillæ, and surmounted similarly with bristles.

*Hab.* MEXICO, Omilteme in Guerrero 7000 to 9000 feet (*H. H. Smith*).

## ATAULFO*, gen. nov. (Theridiidæ).

*Cephalothorax* nearly round, perhaps slightly longer than broad, the anterior extremity in the middle of the lower margin of the clypeus a little produced in a short blunt beak-like form, moderately but uniformly convex, the profile, from the ocular area, forming a moderate and uniform curve; normal indentations, excepting the thoracic, which is longitudinal and slight, obsolete; ocular area well defined, prominent and tuberculiform; height of clypeus exceeding half that of the facial space.

*Maxillæ* short, strong, greatly inclined towards (almost meeting over) the labium, so much so that the truncation on the outer side of the extremity of the two forms a very nearly straight transverse line.

*Labium* very small, broader than high, semicircular at the apex; and from its base being inserted into the sternum in a curved line, it is of a somewhat transverse-oval form.

*Sternum* heart-shaped, longer than broad, truncate at its anterior extremity, and broadly and obtusely produced between the coxæ of the fourth pair of legs.

*Legs* moderate in length and strength, subequal, 4, 1, 2, 3, furnished with hairs only; tarsal claws with 2–3 minute teeth.

*Falces* small, weak, straight, perpendicular.

*Eyes* close together, rather large and round, in a compact group on the ocular prominence; the posterior row with a very slight curve, whose convexity is directed forwards; the anterior row curved in a similar direction, but much more strongly; quadrangle of the central four distinctly longer than broad.

### **Ataulfo nugax,** sp. n.

*Adult male*, length 1 line.

*Cephalothorax*, *falces*, *legs*, *palpi*, *maxillæ*, *labium*, and *sternum* yellow-brown. Ocular area black, the legs tinged with orange, and the maxillæ, labium, and sternum with brownish.

*Eyes* of the posterior row near together, the intervals being very small and equal. The interval between the fore-centrals is about half a diameter, and of each from the fore-lateral eye on its side about half that extent. The fore-centrals are smallest, the rest subequal; the fore-laterals are the largest; the laterals are separated by a narrow but distinct interval.

*Palpi* short, similar to the legs in colour. Radial joint very short, spreading, without any external apophysis at its extremity, but with a distinct prominence at its base on the outer side; the margins of this joint have a row of strong bristly hairs. The cubital joint is strongly bent and furnished with a few bristly hairs on its fore side. The digital joint is very large, oval, obtuse, though narrowest at its fore extremity and furnished with bristly hairs; its length is at least equal to that of the humeral and cubital joints together; its colour is yellow-brown. The palpal organs, directed outwards, consist of several strong corneous processes; one of these towards their base is produced into a long, tapering, black spine, which curves all round the base and inner margin of the digital joint, and has its fine point in conjunction with some other processes at the fore extremity of these organs.

The *falces* are only equal in length to the height of the clypeus, and scarcely reach to the fore extremity of the maxillæ.

The *abdomen* is oval, tolerably convex above, of a dull brownish hue, thickly marked with black, which is in

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* Nom. propr.

the form of many vertical dashes on the sides. It is furnished pretty freely with strong, prominent, bristly hairs. Anal tubercle large and two-jointed.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## XYSTICUS, C. L. Koch.

### **Xysticus facetus,** sp. n.

*Adult male*, length 2¼ lines.

*Cephalothorax* as broad as long. Colour yellow-brown, thickly marked on the sides with black-brown, leaving a broad central longitudinal yellow-brown band; on each side near the hinder extremity is a large black blotch, and another smaller one marks the thoracic indentation. At the middle of the central band is a large **U**-shaped yellow-white line, the lower extremity of which crosses the thoracic indentation, and the band itself is bisected longitudinally by two indistinct nearly parallel dusky lines enclosing a central line of short spine-like bristles; a large part of the ocular area from a clearly defined line running from the hind-lateral eyes behind the fore-laterals and a little way in front of the hind-centrals is yellow-white. The spine-like bristles on the caput and lower margin of the clypeus are normal. The height of the clypeus is slightly more than one-third of the facial space.

*Eyes* normal. The four centrals form a square. The hind-central pair are distinctly nearer together than to the hind-laterals, while the fore-centrals are distinctly further from each other than from the fore-laterals.

*Legs* tolerably long, strong, spines normal, 1, 2, 4, 3. Excepting the tarsi and metatarsi, they are deep rich blackish-red-brown. The femora, chiefly on the anterior side, are marbled with yellowish and white; those of the 3rd and 4th pairs have the most spotted or marbled look, from the red-brown being broken up into blotches.

*Palpi* short, strong, similar to the legs in colour, the humeral joint dark reddish-brown, the last mottled with yellow-brown, blackish, and white. Cubital and radial joints stout; the latter is shortest, and has a strong obtusely-pointed apophysis at its fore extremity on the outer side, rather less in length than the joint itself, and fitting closely to the base of the digital joint, and another apophysis more underneath bent upwards towards the palpal organs, and broadest at its extremity, which is obliquely truncated. Digital joint large, broad-oval. Palpal organs encircled with a long, strong, tapering black spine which has its origin in the central lobe; towards the hinder part of these organs, and within the basal curve of the spine noted above, are two strong prominent spiny processes with their extremities in contact with each other; one of these is much smaller than the other, and is of a curved, tapering, spine-like appearance. These two processes are found in various forms and sizes in almost all the known males of this genus, and are very characteristic of the different species. In front of the base of the central spine are two other strong corneous processes directed outwards to the edge of the digital joint; this joint has also a strong obtusely-ending lobe or prominence on the outer margin, close in contact with the end of the radial apophysis.

*Falces* normal, powerful, yellow-brown, marked and mottled with dark brown and whitish, the latter mostly towards their extremities.

*Maxillæ* and *labium* yellow-brown, irregularly marked with black-brown.

*Sternum* yellow-white, with a yellow-brown border, blotched and marked irregularly with deep black-brown, and with a clear brownish-yellow marginal border.

*Abdomen* rather large, as broad as long, truncate before, round behind. The upperside is dark yellow-brown, marked thickly with deep black-brown; the sides forward are broadly white, and a large white patch marked with yellow-brown occupies the middle of the anterior margin; on each side near the middle is a short, slightly oblique, irregularly shaped, transverse white bar (or a long one interrupted in the middle); following this, towards the spinners, are two other transverse, slightly curved bars of the same hue, running almost entirely across the upperside, followed by two or three other short and less well-defined whitish bars closer together than the longer ones. The sides and hinder extremity are rugulose, white, more or less marked with deep brown. The intensity and clearness of these markings of the abdomen vary much in different examples. The underside is mottled and marked with yellow-brown, blackish, and white. The upperside is thickly covered with short, strong, spiniform, prominent, black bristles.

*Hab.* MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

## SYNÆMA, Simon.

### **Synæma cirripes,** Cambr.

*Synæma cirripes,* Cambr. anteà, p. 79, t. 10. figg. 11, 11 *a–d.*

The male only of this spider has been described. The adult female now recorded is much like the male in general colours and markings, but is larger, length 3 lines. The cephalothorax is glossy, tinged with olive-greenish ; the legs, falces, maxillæ, labium, and sternum are uniformly pale yellow. The quadrangle of the four central eyes is rather broader in proportion to its length, bringing these eyes somewhat nearer to the laterals. The bristles on the front of the falces are more numerous, shorter, and more spiniform. The spines beneath the first two pairs of legs are shorter, stronger, and more regularly disposed in four pairs. The abdomen is much broader, and rounded behind. The genital aperture is small, but of characteristic form. In the disposition of the eyes this species shows a marked approach to the genus *Xysticus.*

*Hab.* MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

## LITHYPHANTES, Thorell.

### **Lithyphantes quæsitus,** sp. n.

*Adult male,* length 2 lines.

General form and structure normal.

*Cephalothorax* deep rich red-brown, approaching to black, and thickly covered all over with minute tubercles or strong granulations ; lateral marginal impressions at the caput slight, but the thorax on the sides in front is somewhat tumid in form or at least more convex than usual. The caput is raised but little above the thoracic level ; normal indentations strong. Clypeus impressed transversely close to the eyes, but convex below ; its height considerably greater than the longitudinal diameter of the ocular area.

*Eyes* subequal, the fore-laterals slightly largest. The very slight curve of the posterior row directed forwards, that of the anterior row in the same direction more strongly but not excessively ; the tubercular prominences, on which the lateral pairs and fore-central pairs are seated, moderate. The quadrangle of the four central eyes is very nearly a square, its width being perhaps very slightly greater than its length ; the eyes of the hind-central pair are separated by less than a diameter, each being a diameter's distance from the hind-lateral eye on its side. The fore-central pair are less than an eye's diameter from each other, and still less from the fore-laterals. The laterals are nearly but not quite contiguous to each other.

*Legs* moderate in length and strength, 1, 4, 2, 3. Femora thinly furnished with minute tubercles or granulations ; those of the first pair strongest, well furnished with hairs, of which many are erect. Femora, genuæ, and coxæ of the first and second pairs dark yellowish-brown, first pair darkest ; the tibiæ, metatarsi, and tarsi orange-yellow ; the tibiæ with a dark brown annulus at the fore extremity. The third and fourth pairs are orange-yellow, the coxæ dark yellowish-brown ; the femora slightly suffused with brown, and there is a yellow-brown annulus at the fore extremity of the tibiæ. Superior tarsal claws strongly pectinated.

*Palpi* moderately long, yellow-brown, the cubital, radial, and digital joints of a darker hue ; the radial joint enlarges gradually and greatly to its fore extremity, and is furnished with bristly hairs ; the digital joint is large, oval, clothed with bristly hairs. Palpal organs well developed, compact, and with a pale, somewhat bent, prominent corneous process on the outer side of their fore extremity.

*Falces* equal in length to the height of the facial space, vertical, straight, and not divergent, a little roundly prominent at their base ; outer profile-line rather hollow ; colour dark brown.

*Maxillæ* strong, of moderate length, considerably inclined towards the labium, and truncate at their extremity, both on the outer and inner sides. Colour dark brown.

*Labium* much broader than high, rather narrower at the apex than at the base ; apex a little hollow-truncate. Colour like that of the maxillæ.

*Sternum* heart-shaped, strongly granulose, its posterior extremity produced into a longish, cylindric, obtuse-ending point between the coxæ of the fourth pair of legs. Colour like that of the maxillæ and labium.

*Abdomen* oval, black, with a longitudinal central narrow white stripe on the upperside, crossed by 4 or 5 others—one in front below the anterior upper extremity long and fine, running obliquely and sinuously backwards on each side, the next (more oblique on each side of the longitudinal one) shorter but also sinuous, and not far from the fore extremity, the next runs across the middle, at right angles, followed by one or two more towards the spinners decreasing in length; these last lines do not run down the sides. On each side is a short longitudinal angulated line whose fore-end meets the second transverse line above noted. The connecting pedicle is covered by a strong circular corneous socket. The fore-half of the underside is covered by a dark yellow-brown coriaceous plate including the plates of the spiracles. The rest of the underside is black, with some obscure pale yellowish markings on each side. A small transverse slit in the middle towards the spinners, and another longer one just in front of them, are probably the orifices of tracheal organs. Spinners short, compact, the inferior pair strongest; colour blackish, tipped with a pale hue.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## **Lithyphantes lætus,** sp. n.

*Adult male*, length $1\frac{3}{4}$ lines.

*Cephalothorax* considerably longer than broad, roundly truncate in front. Caput rather elevated in the ocular region, the anterior part of which is prominent; lateral marginal impressions very slight. Colour bright reddish-orange-yellow; the surface, especially the sides of the caput, covered with minute granulosities and shallow roundish punctures or pock-marks.

*Eyes* subequal, those of the lateral pairs larger than the rest, the fore-laterals largest; the very slight curve of the posterior row is directed forwards, the strong curve of the anterior row also directed forwards. The four centrals form a quadrangle longer than broad, its anterior side perhaps a trifle longer than the posterior side. The fore-lateral pairs are separated by distinctly more than a diameter, and are seated on a strong tubercular prominence; each is also about a diameter from the fore-lateral eye on its side; those of the lateral pairs are separated by a small interval, and are on strong tubercles, forming lines at right angles to the line of the posterior row. The hind-centrals are separated by distinctly less than a diameter, and each is nearly one and a half diameters from the hind-lateral eye on its side. The clypeus is much impressed above, and its height is considerably greater than the length (from back to front) of the ocular area.

*Legs* moderately long, subequal, 4, 1, 2, 3, not very strong, coloured like the cephalothorax; femora very slightly granulose, furnished only with hairs.

*Palpi* moderate in length, similar to the legs in colour, except the cubital and radial joints, which are suffused with dusky yellow-brown, digital joint deep brown. The humeral joint has a single longitudinal row of spine-like bristles on the outer side, with others rather stronger on the inner side; some small granulosities also on the inner surface. The radial joint is greatly and roundly produced on the upperside forwards, with a submarginal series of strong spine-like bristles directed forwards. The digital joint is large, oval, and continues the form of the radial joint, of which (from the upperside) it almost appears to form a part; it is thickly covered with coarse bristles. The palpal organs are not very complex, with a strong corneous process at their fore extremity, from which there issues a long slender black spine, forming a large bold curve beneath on the outer side.

*Falces* long, strong, especially the basal portion, the extremities being more tapering and strongly divergent; they are of a dark reddish-orange-brown colour, and furnished with hairs and minute granulations in front.

*Maxillæ* long, strong, greatly inclined towards the labium, broadly and a little obliquely truncated at their outer, and pointed at the main, extremities. Their base is roundly protuberant, giving an oblique transverse general impression about the middle. Their colour is similar to that of the falces.

*Labium* large, broader than high, the apex rounded, sides nearly parallel; colour suffused with dusky blackish.

*Sternum* heart-shaped, pointed at its hinder extremity, from which a kind of narrow, tapering, blackish ridge (looking like a slender spine) runs on between the posterior coxæ.

*Abdomen* oval, the connecting pedicle shielded by a strong circular ridge and socket, in connection with a large yellow-brown coriaceous area covering almost the whole of the anterior half of the underside of the

abdomen. Its colour is black, with a submarginal crescent or transverse curved narrow band of white at the fore extremity of the upperside, and another narrower one, with a break in the centre and an angle on the sides, across the middle, followed by some small distinctly white spots along the median line towards the spinners, two in a transverse line, and then single ones; on the underside are two less distinct white spots in a longitudinal median line on the hinder half.

*Hab.* Costa Rica (*Sarg*).

## DELOZEUGMA, Cambridge.

### **Delozeugma mordax,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines.

In general form and appearance this spider nearly resembles *D. depictum* (suprà, p. 145). It is, however, much smaller, and differs, notably, in the structure of the palpi and palpal organs.

*Cephalothorax* bright yellow-brown, with darker converging lines indicating the normal grooves and indentations.

*Eyes* of the posterior row very nearly straight, the convexity of its slight curve perhaps directed backwards and that of the anterior row forwards. The laterals are on strongish tubercles, the fore-laterals largest, the fore-centrals, if anything, the smallest of the eight. The intervals between those of the anterior row are equal, that between the hind-centrals is more than two diameters, each hind-central being slightly less than two from the hind-lateral eye on its side. The four central eyes describe a quadrangle whose breadth is greater than its width, and its anterior side shortest. Some strong bristly hairs are directed forwards from the clypeus, which in height is equal to the diameter of the fore-central eyes.

*Legs* 1, 4, 2, 3, moderate in length and strength; spines on all the joints excepting the tarsi mostly long and slender; colour light orange-yellow. Tarsal claws 2, strongly toothed. The claw-tuft beneath the tarsal claws is composed mainly of several strong, flattened, broad, somewhat leaf-like processes, broadest and truncated at their extremity and springing from a small claw-joint.

*Falces* long, strong, and straight, tapering, more than half the length of the cephalothorax, very projecting, and considerably cut away beneath on the inner side; dark reddish-yellow-brown in colour, glossy, with a few small granulosities, and bristly hairs on the surface, more striated and granulose towards their extremity on the inner side; some of the granulosities have a minute dentiform appearance and are surmounted with bristly hairs; in a line with those running backwards are two teeth on the lower inner margin, the posterior one strongest.

*Fangs* long, strong, not dentate, but with an incrassation along the hinder half. The fangs are articulated nearly horizontally and lie straight backwards along the lower side of the falces, but have their direction a little obliquely inwards, their points thus crossing near their extremity.

*Palpi* moderate in length and strength, similar in colour to the legs; radial rather longer than the cubital joint, the latter with one (at its fore extremity on the upperside), the former with several, strong bristly hairs; the radial joint has also at its outer extremity a strongish apophysis, somewhat bent outwards, broad, flattish, obtuse, with its extremity curiously hollowed or scoop-shaped, bearing a strong resemblance to the obtuse toe part of an old slipper; digital joint yellow-brown, of moderate size, elongate and obtusely keeled, oval in form. The palpal organs are well developed, but not very complex, with a sharp pointed, strongish, but not very long, spine directed downwards at their anterior extremity.

*Maxillæ* long, strong, much broader at their extremity than at the middle, rounded on the outer, obliquely truncate on the inner, extremity.

*Labium* higher than broad, hollow-truncate at the apex, which reaches to a little above a level with the socket of the palpus, and so less than half the length of maxillæ. The colour of the maxillæ and labium is dark yellowish-brown.

The *sternum* is rather elongate-oval, its posterior extremity slightly drawn out into an obtusely rounded broad point between the coxæ of the fourth pair of legs; it is very glossy, and its colour is yellow-brown.

The *abdomen* is cylindric-oval, truncate in front; its colour is dull luteous-yellow-brown, with some dusky blackish-brown spots along the middle of the upperside in two longitudinal nearly parallel lines, the last

five or six pairs of spots representing the normal angular bars or chevrons; the sides are suffused with dusky-brown. Spinners rather short, about equal in length, compact, those of the inferior pair strongest, tapering, and contiguous, the superior pair excavated or hollow on the inner side (though this may have been from an accidental shrinkage, but the condition of the others and the rest of the abdomen showed no corresponding signs of anything abnormal). Colulus small, tapering, but obtuse at its extremity.

*Hab.* MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

N.B.—A "triangular prominence immediately below the spinners" of *Delozeugma depictum*, noted *anteà*, p. 146, is no doubt the portion of structure named by M. Simon the colulus; but its purpose is not yet known.

## FILISTATA, Walckenaer.

### **Filistata tractans,** sp. n.

*Adult male*, length slightly over $3\frac{1}{2}$ lines.

*Cephalothorax* flattened, broad-oval, obtuse at each end; anterior margin very slightly prominent in the middle; thoracic indentation longitudinal and strong. It is yellow-brown in colour, with scratchy black markings, and clothed with coarse, adpressed, whitish hairs; the margins and a tapering stripe from the eyes to the thoracic indentation are blackish-brown.

*Eyes* in normal position, on a strong transverse, oval, tubercular prominence. They form a quadrangle considerably broader than long; looked at from above and behind, the anterior row, which is slightly the shortest, has the convexity of its strongest curve directed backwards; the curve of the posterior row is very slight and directed forwards. The fore-centrals almost touch the fore-laterals, and the former are rather less than half a diameter's interval from the latter. The interval between the hind-centrals is equal to two diameters, and each is contiguous to the hind-lateral eye on its side. The interval between the eyes of each lateral pair is about equal to one-third of a diameter, these eyes being very nearly of equal size and largest of the eight.

*Legs* long, moderately strong, 4, 1, 2, 3, similar in colour to the cephalothorax; all the femora are suffused with a darker hue, and clothed with hairs and a few spines, the most noteworthy being some in two longitudinal rows in front of the femora.

*Palpi* very long, rather slender; cubital joint very short, radial of great length, equal to that of the whole of the rest of the palpus, nearly cylindric, similar to the legs in colour, destitute of spines, excepting some of a bristle-like nature in front of the base of the humeral joint; digital joint very small; palpal bulb marked with several parallel transverse striations springing from its fore extremity, small, somewhat circular, but produced forwards into a gradually tapering fine-pointed spine, slightly bent about the middle, but not twisted. The length of the bulb and its prolongation exceeds that of the digital joint.

*Falces*, *maxillæ*, and *labium* of normal form; similar to the legs in colour, and clothed with coarse hairs.

*Sternum* nearly round, its posterior extremity slightly pointed, similar to the cephalothorax in colour and with black scratchy markings.

*Abdomen* small, elongate-oval, somewhat cylindric, produced in a bluff rounded form a little way over the spinners; it is of a dark yellow-brown colour, thickly clothed with short, coarse, yellow-brown hairs, and marked from the fore margin nearly to the hinder extremity with a fine central longitudinal clear yellowish line; on the middle of the underside or, rather, halfway between the normal breathing-organs and the spinners is a slit or transverse strong fold in the epidermis, evidently the orifice of a spiracular organ. Spinners short, in a tolerably compact group within a circular cavity fringed with short coarse hairs. The cribellum is very small and inconspicuous.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## ANYPHÆNA, Sundevall.

### Anyphæna clubionoides, sp. n.

*Adult male*, length $2\frac{1}{2}$ lines; *female*, slightly over $2\frac{1}{2}$ lines.

*Cephalothorax* yellow to orange-yellowish, with a broken more or less distinct narrow longitudinal stripe on each side formed by the bases of converging lines, of which the remainder is obsolete.

*Legs*, *palpi*, and *falces* similar in colour to the cephalothorax.

*Palpi* (of the male) moderately long and strong; radial and cubital joints short, and about equal in length, the former rather longest, a single long, strong, filiform-ending bristle at the fore extremity on the upperside of the latter; others (3–4) shorter, but as strong on the former (radial); at the fore extremity on the outer side of this joint is a group of strong, pale, bristly hairs, and (its base almost concealed by them) an apophysis nearly or quite as long as the joint, its base having a kind of concave enlargement above; the longer portion straight, somewhat like the blade of a knife, its obtuse point resting beneath the base of the digital joint on the edge of the palpal organs; at the base of the radial joint on the outer side beneath is an obtuse prominence. The digital joint is large, as long as the humeral joint, oval, densely clothed forwards with long, strong, pale, bristly hairs. Palpal organs highly developed, not very complex, consisting of several strong, curved, corneous processes. On the inner side of the humeral joint are numbers of short minute bristles and granulosities, perhaps used for rubbing against some stronger and numerous punctuosities on the outer side of the falces, and producing probably stridulating sounds.

*Maxillæ* and *labium* similar in colour to the cephalothorax; *sternum* yellow.

*Abdomen* pale luteous-yellowish, marked on the upperside with short, brownish, linear spots, the most noticeable among which represent on the hinder part the ordinary longitudinal central series of the normal angular markings or chevrons.

The female resembles the male in colours and markings, but is paler. The genital aperture is not very large, but of distinctly characteristic form. The transverse spiracular opening on the middle of the underside of the abdomen is rather indistinct in both sexes.

*Hab.* Mexico, Amula in Guerrero (*H. H. Smith*).

It is not without some doubt that this spider is given as new, there being a considerable number of species of this genus described by the late Count Keyserling from North and South America. The species, however, run very closely together, and the figures (where given) and descriptions leave their identity by no means a matter of certainty; it is therefore, I think, better to risk it as new, with good figures (which will tend to less confusion in the end), than to label it uncertainly as one of those already described.

## OPAS *, gen. nov. (Epeiridæ).

*Cephalothorax* longer than broad; lateral marginal impressions at the caput moderate; normal indentations strong, especially that at the thoracic junction; upper convexity moderate; height of the clypeus greater than the diameter of the fore-central eyes.

*Eyes* of tolerable size and occupying the whole width of the caput, subequal; the hind-laterals smallest, the fore-laterals rather the largest; the fore-central pair on a strong tubercular prominence, each lateral pair on a tubercle; the hind-centrals nearer together than to the hind-laterals; the convexity of the slightly curved posterior row is directed forwards; the anterior row, which is very strongly curved, has its convexity also in the same direction. The four central eyes form a quadrangle a little longer than broad; its fore side but slightly, if at all, wider than its hinder side.

*Legs* short, 1, 2, 4, 3, moderately strong, destitute of spines, excepting a slender one at the fore extremity of the genual joints. The femora of the fourth pair bent inwards, and two-thirds of their length from the

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* Nom. propr.

base furnished on the outer side with a series of two parallel longitudinal rows of long bent hairs, their extremities taking a circular form ; each hair springs from a minute tubercle.

*Falces* powerful, moderately long, strongly and roundly prominent at their base in front.

*Maxillæ* moderate in length, broad, truncate at their extremity, which is rounded on the inner side, strongly divergent.

*Labium* short, much broader than high, rounded at the apex.

*Sternum* broadly heart-shaped and convex, its hinder extremity rather broadly drawn out between the coxæ of the fourth pair of legs.

*Abdomen* subcylindric, its posterior extremity produced into a caudiform prominence.

### Opas lugens, sp. n.

*Adult female*, length to the spinners $1\frac{2}{3}$ lines, to the extremity of the abdominal prominence $2\frac{2}{3}$ lines.

*Cephalothorax*, *falces*, *maxillæ*, *labium*, and *sternum* dark brown ; *legs* and *palpi* paler, excepting the femora of the former.

*Eyes* of the hind-central pair separated from each other by less than a diameter's interval, and by double that interval from the hind-laterals.

The *abdomen* has its fore extremity rather broadly and obtusely produced in front. Its upperside is dull yellow-brown, with a blackish tapering band down the middle, and alternate black and silver oblique stripes of different length and strength on each side ; the posterior prominence is black, rounded and a little the largest at its extremity, at its base on each side is a silvery dash or stripe. There is also a silvery spot in the middle of the fore extremity, and along the lower part of each side is a somewhat wavy, slender, broken, pale yellow-brown line marked with silvery spots. The underside of the abdomen is black, marked with six silvery spots, the four posterior ones forming a quadrangle broader than long close in front of the spinners ; the anterior pair of spots are elongate and near the genital aperture, which is of a simple, somewhat tranverse, oval form. Spinners short, compact.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

This species bears a close general resemblance in form and markings to *Argyroepeira* (Emert.), but differs in the position of the eyes, the length of the legs, the absence of spines on them, and the very peculiar series of hairs on small tubercles on the femora of the fourth pair.

### Opas mœrens, sp. n.

*Adult female*, length $2\frac{2}{3}$ lines.

This spider is nearly allied to *O. lugens*, but may be at once distinguished from it by the far less developed prominence of the hinder extremity of the abdomen. In the present species this is very obtuse and extends but little beyond the spinners. The colour of the cephalothorax varies from pale brownish-yellow to darkish yellow-brown ; the legs are yellow to yellow-brown, annulated, chiefly at the extremities of the femora, genuæ, and tibiæ, with dark brown to black ; a less distinct annulus towards the base of the tibiæ. The abdomen is very much and roundly produced forwards, the connecting pedicle being placed exactly halfway between its fore extremity and the spinners. Its colour is dull black, the fore extremity has on each side a strong well-marked silvery crescent, and there are other silvery spots and markings, both on the sides and on the upperside, differing in pattern from those of *O. lugens* ; the underside has six small silvery spots as in that species. The posterior pair of legs are furnished on the outer side of the femora with a similar series of minute tubercles and long slender curved hairs. The genital aperture is, though somewhat like that of *O. lugens*, yet characteristically different, being transverse-oval, with a prominent point in its anterior margin.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith speaks of the snares of this spider as regularly geometric, from 8 to 10 inches in diameter, and made in damp shady places on herbs or low branches. The

meshes are fine, and the webs are not drawn up in the centre; the radii are about twenty-five in number, and the concentric lines the same. The spider sits beneath the centre.

### EDRICUS, Cambridge.

**Edricus productus,** sp. n.

*Adult male*, length $3\frac{1}{2}$ lines.

*Cephalothorax* greatly and somewhat gradually drawn out at its hinder extremity and ending obtusely; its total length considerably over double its width at the widest part. It is dark yellow-brown in colour, covered with coarse granulosities.

*Eyes* of the central group much the largest, forming nearly a square, its anterior side shortest. Those of each lateral pair are nearly contiguous, or at most separated by an interval of much less than a diameter. The interval between those of the hind-central pair (which are the largest) is much less than that between each and the hind-lateral eye on its side.

*Legs* long, slender, 4, 1, 2, 3. Spines on the tibiæ only of the 1st and 2nd pairs and on the metatarsi also of the 4th, and three or four short fine ones beneath the femora of the fourth pair; on the underside of the enlarged extremity of the tibiæ of the second pair is a strong subconical prominence surmounted by a strong, slightly bent, tapering, sharp-pointed black spine; this tibial prominence is probably a sexual character.

The *palpi* are short, the digital joint large and with its hinder extremity on the outer side produced into a strong apophysis, whose extremity is abruptly enlarged into a kind of rim-like termination; this joint is furnished with some strong bristly hairs on its outer side, and there is a long, strong, somewhat sinuous one at the extremity in front of the cubital joint, and others on the radial. The palpal organs are very prominent and complex, with various strong corneous lobes, processes, and spines.

*Falces* strong, moderately long, much impressed in front near their extremity, where they are thus a little divergent and directed forwards. Colour yellow-brown.

*Maxillæ* and *labium* normal, yellow-brown, tipped with pale yellowish.

*Sternum* somewhat pentagonal, the anterior margin incurved, the hinder extremity drawn out into a long narrow parallel-sided prominence as long as the fore parts, and ending in a fine sharp point between the coxæ of the fourth pair of legs.

*Abdomen* elongate, cylindrical, narrow, with two strong prominent sharp-pointed divergent spines in a transverse line near the fore margin, two conical tubercular prominences on each side, and its hinder extremity divided into four strongish conical prominences—one on each side, one a little above them in the middle, and the other a little way in front of the last-mentioned. The colours of the abdomen appeared to be a mixture of black, yellowish, and whitish, but the integument was too much damaged to be able to trace the pattern. The spinners are strong, short, compact, and placed halfway along the underside of the abdomen; the fore part underneath is covered with yellowish-brown coriaceous integument.

This spider may be easily distinguished from the type, *E. spinigerus*, Cambr.; it is only questionable whether the different relative position of the eyes and the remarkably different development of the cephalothorax and sternum and some other characters do not justify the formation of a new genus for its reception. These differences, however, may be only specific; the examination of other allied forms, which probably exist, though not yet discovered, can alone decide this point.

*Hab.* MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

### RHOMPHÆA, L. Koch.

**Rhomphæa projiciens,** sp. n.

*Adult male*, length, to the spinners, not quite $1\frac{1}{4}$ lines ($2\frac{1}{2}$ millim.); from the spinners to the extremity of the abdomen $1\frac{1}{2}$ lines. *Adult female*, length $1\frac{1}{2}$ lines (or 3 millim.); from the spinners to the extremity of the abdomen $2\frac{1}{2}$ lines (or 5 millim.).

The whole of the fore part of the male of this spider (which is of the normal form) is yellow. The *cephalothorax* has a strong transverse indentation at the thoracic junction; the caput is considerably elevated,

and the height of the clypeus, which is prominent, is equal to two-thirds of that of the facial space; an ill-defined black stripe runs along each side of the thorax, and another from each of the fore-lateral eyes a little obliquely outwards to the lower margin of the clypeus; a long, strong projection issues prominently forwards from the middle of the ocular area, its form being that of a goose's neck and head, furnished with strong hairs, and terminating in a slightly curved tapering spine.

The *eyes* occupy the upper part of the prominence of the caput. The four centrals form a large square. The slight curve of the posterior row is directed backwards, and the strong curve of the anterior row forwards; the interval between the hind-centrals is equal to one-half or nearly two diameters, but from each to the hind-lateral on its side is scarcely more than one-fourth of a diameter, those of each of the lateral pairs are contiguous to each other, and the fore-lateral on each side is very nearly contiguous to the fore-central eye on its side. The fore-centrals are largest of the eight.

*Legs* very long and slender, 1, 4, 2, 3, and greatly unequal in length, furnished with fine hairs only; their colour is pale yellowish, marked and spotted with yellow-brown, mostly in the region of the different articulations.

*Palpi* rather long, slender, similar to the legs in colour, but the humeral joint has a black well-defined stripe along its anterior side. The cubital and radial joints are both somewhat clavate, the latter is considerably the longest, and is also curved upwards at its fore extremity, where it is furnished with strong bristly hairs. The digital joint is not very large, equal in length to the cubital, oval, pointed at its fore end. The palpal organs are not very prominent; of the several corneous processes one on the outer side ends in a slender, curved, not very long, tapering spine.

*Falces* neither long nor strong, similar in colour to the cephalothorax, with an indistinct black stripe down the front of each.

*Maxillæ* long, strong, greatly inclined towards and in front of the labium. Colour pale yellow.

*Labium* large, semicircular, being a continuation, without sign of junction, of the sternum; it is also circularly convex in front.

*Sternum* very convex, elongate, subtriangular, its posterior extremity broadly and considerably produced between and beyond the coxæ of the fourth pair of legs. The colour of the sternum and labium is similar to that of the falces, their sides, however, are irregularly but closely marked with black; from the beginning of the coxæ of the fourth pair of legs to the extremity of the produced sternum it is completely black.

*Abdomen* produced at its hinder extremity into a nearly erect, tapering, pointed eminence, equal in height to the length of the cephalothorax and abdomen (to the spinners); it is of a dull luteous hue, with one or two blackish markings, but almost completely covered with more or less coalescing silvery spots; its point ends with a distinct slightly tapering thorn-like (but apparently not corneous) projection.

The female resembles the male in general colours and markings, but these are in this sex better and more distinctly marked; on the fore part of the abdomen is a narrow, blackish, tapering, longitudinal dentated marking, and the projecting part of the abdomen is much longer in proportion. The clypeus also projects more forwards.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith remarks that the web in which these spiders were found was not, he thinks, that of their own making. This corroborates what we already know of the habits of this group, which are quasi-parasitic.

## EGILONA *, gen. nov. (Theridiidæ).

*Cephalothorax* short-oval, obtuse in front, rather longer than broad; lateral marginal impression at caput not very strong, but gradual and distinct. Caput rather elevated, and prominent at the ocular region; the profile rises gradually and evenly, a very slight hollow behind the occiput, which is very slightly convex; height of the clypeus equalling more than two-thirds of the facial space, it is prominent at the lower margin, but impressed below the eyes.

* Nom. propr.

*Eyes* small, subequal, occupying the whole width of the caput; in two transverse not very strongly curved rows, the posterior row has the least curve, its convexity directed backwards, that of the anterior row forwards. The four centrals form a quadrangle, whose fore side is rather the shortest, and its width behind rather greater than its length.

*Legs* moderately long, slender, 1, 2, 4, 3, furnished with short slender hairs only.

The *palpi* have the whole fore extremity of the radial joint produced into a strong apophysis.

*Falces* moderately strong, equal in length to the height of the clypeus.

*Maxillæ* strong, straight, broader at the extremities than in the middle, and greatly inclined over the labium.

*Labium* small, only one-third the width of the fore margin of the sternum, broader than high, and apparently of a somewhat subtriangular form.

*Sternum* heart-shaped, about equal in length and breadth; its posterior extremity produced between the coxæ of the fourth pair of legs, bending over and widening round them; the width of this produced part of the sternum is equal to the width of the coxæ.

*Abdomen* connected with the thorax by a short but distinct coriaceous sheath-like pedicle.

## **Egilona munda,** sp. n.

*Adult male,* length 1 line.

*Cephalothorax* and falces bright orange-yellow, ocular area suffused with blackish. Legs suffused with blackish-brown, excepting the femora, of which the fore extremities only are blackish, the rest being orange-yellow. The ocular area is furnished with a few prominent hairs. The abdomen is rather large, oval, considerably convex above, of a pale dull yellowish hue, and thinly clothed with hairs; its extreme point and the spinners are blackish.

The *eyes* of the hind-central pair are separated from each other by two diameters' interval, and from the laterals by about one and a half. The eyes of the anterior row are about equidistant from each other, and those of each lateral pair are contiguous.

*Palpi* moderate in length; the cubital and radial joints short and equal in length, the latter the strongest, and with its extremity produced into a strong, prominent, bent, squarely truncated apophysis; the digital joint is large, dark brown, prominent on the outer side, broadly obtuse at the extremity, and with a prominent obtuse point at its base on the inner side, and clothed with coarse hairs. Palpal organs highly developed, complex, and prominent; at their base on the outer side is a strong, circularly curved, corneous process (called the falciform process, and which, though apparently part of the palpal organs themselves, is in reality independent, and springs from the base of the digital joint); connected with the palpal organs are also two long, strong, somewhat coiled, black tapering spines. No description, however, can, apart from a figure, give a clear idea of the intricate structure and form of these organs in a large number of spiders in this and other groups.

The *maxillæ*, *labium*, and *sternum* are orange-yellow.

*Hab.* GUATEMALA, Chipor (*Sarg*).

### LEPTYPHANTES, Menge.

## **Leptyphantes longispinosa,** sp. n.

*Adult male*, length nearly $1\frac{1}{2}$ lines, or very nearly 3 millim.

The whole of this spider is yellow, the *cephalothorax* a little the darkest and brightest; profile-line almost even and gradually sloping behind the ocular area, where it curves over to the anterior eyes. Clypeus in height exceeding half that of the facial space; it is full, convex, and prominent below, but impressed immediately below the eyes.

The *eyes* are small, subequal; those of the posterior row have a very slight curve directed backwards, those of the anterior row an equal opposite curve. They are all seated on black spots, and all, excepting the fore-centrals, pearly-white. The four centrals form a quadrangle longer than broad, and its anterior much shorter than its posterior side. The hind-centrals are divided by an eye's diameter from each other, and by nearly two diameters from the hind-lateral eye on its side. Those of each lateral pair are placed slightly obliquely on a small tubercle, and are contiguous to each other.

The *legs* are long, slender, 1, 4, 2, 3, those of the first pair greatly exceeding the rest. The femora of the first

pair have two slender spines in a longitudinal line beneath the fore extremity, and one much stronger nearer the middle on the inner side. The tibiæ and metatarsi have one spine on each (that on those of the first pair, however, is broken off).

The *palpi* are short, the radial joint stronger than the cubital, rather spreading at its fore extremity, and furnished on the outer side with bristly hairs. The digital joint is large, with a lobe and an obtuse prominence at its base on the outer side. The palpal organs are highly developed, prominent, consisting of some strong corneous processes and spines, conspicuous among which is a long, rather slender, tapering one issuing from their base, and curving downward with a large circular sweep underneath, and up round their outer side, ends in a filiform point.

*Falces* long, strong, convex in front, slightly divergent at their extremities.

*Maxillæ* strong, straight, and inclined to the labium.

*Sternum* as broad as long, heart-shaped, very convex and smooth, hinder end produced broadly, and spreading between and behind the coxæ of the fourth pair of legs. The width between the base of the coxæ is quite equal to that of the coxæ.

*Labium* small, broader than high, somewhat subtriangular in form.

*Abdomen* elongate-oval, of a dull luteous-yellow hue, with some indistinct black markings at the middle of the fore end of the upperside; a broken longitudinal line of white flecks or spots along the lateral margins, a distinct black spot on each side close to the spinners, and a gemmated black spot close above them; spinners short, compact; colulus small, pointed.

In the greater width between the coxæ of the 4th pair of legs this spider differs a little from the European forms of *Leptyphantes*, but it is scarcely, I think, generically different.

*Hab.* GUATEMALA, Chichochoc, Coban (*Sarg*).

## ASAGENA, Sundevall.

### **Asagena quadrimaculata,** sp. n.

*Adult male*, length $1\frac{1}{2}$ lines.

*Cephalothorax* reddish-yellow-brown, oval, without lateral marginal impression at the caput, uniformly convex, converging lines slight, but a little darker than the rest, slightly granulose towards and on the margins.

*Eyes* of posterior row of equal size, their line very slightly curved, the convexity of the curve directed forwards. The hind-central pair separated by a diameter's interval, and each is separated by a little more than a diameter from the hind-lateral eye on its side. The anterior eyes appear to be slightly larger than the posterior, and the fore-laterals the largest of the eight. The intervals between the anteriors seem to be about equal. The fore-central pair are on a strong tubercular prominence, separated from each other by less than a diameter's interval; those of each lateral pair are also on a strong tubercle and are contiguous to each other. The quadrangle of the four centrals is a little longer than broad.

*Legs* moderately long, 4, 1, 2, 3. The femora are considerably stronger than the rest, of a deep blackish-yellow-brown, the rest orange-yellow; the femora very slightly granulose, and furnished with hairs and slender bristles only.

*Palpi* moderately long; radial and cubital joints short, of equal length, the former strongest, enlarging at the extremity, and coalescing with the digital joint, which is of moderate size and oval form. The palpal organs are neither very prominent nor complex; at their extremity are several corneous, characteristic processes.

*Maxillæ* strong, greatly bent over the labium, angularly prominent at their base on the outer side, and of a yellow-brown colour.

*Labium* small, somewhat transverse-oval in form, a little broader than high, and transversely indented at the middle.

*Sternum* heart-shaped, its hinder extremity drawn out into a short sharp point just between the beginning of the insertion of the legs. The colour of the sternum and labium is yellow-brown, suffused more or less with blackish.

*Abdomen* oval, nearly black, with four well-marked white spots forming a large quadrangle on the fore half of the upperside; the anterior pair of these spots are the largest, but form a transverse line of less length than the posterior pair. Underside dark yellow-brown, with a transverse, curved, pale, indistinct stripe in front of the spinners. At the fore extremity of the abdomen is a strong coriaceous, circular, sheath-like

cavity, into which the connecting pedicle is inserted; and a large somewhat coriaceous shield-like plate in front of the spiracular openings.

*Hab.* GUATEMALA, Antigua (*Sarg, ex Dr. Stoll*).

## SPINTHARUS, Hentz.

### **Spintharus lineatus,** sp. n.

*Adult male,* length 1½ lines.

The whole spider is pale yellow; the abdomen of a duller hue than the rest. In general character and structure and position of the eyes it is of the normal type.

The *palpi* are short, slender; digital joint and palpal bulb of moderate size. The palpal organs are well-developed and prominent; a corneous process towards their fore extremity terminates in a rather long, sinuously curved, tapering black spine, near which is another small one, prominent, bent, and sharp-pointed.

*Abdomen* long, narrow, somewhat cylindric, elongate-oval, obtuse at each end, a little tapering to the posterior extremity; of a uniform dull luteous-yellow, with three pairs of black spots on the upperside, one pair forming a transverse line at the fore margin, another towards the middle, and the third a little way from the hinder extremity, the four anterior spots are linear, the other two coalesce and form an incomplete transverse line; on each side of the abdomen are two longitudinal parallel black lines near together, the lower one ending in a black spot near the spinners.

*Hab.* GUATEMALA, Chichochoc (*Sarg*).

### **Spintharus affinis,** sp. n.

*Adult male,* length 1¼ lines.

This species is very nearly allied to the foregoing, and resembles it closely in general colour and character; but the palpal organs in place of the rather long sinuously bent spine at their extremity have there only a much shorter, curved, and less prominent one. The abdominal markings are also different: in the present species there is a longitudinal central tapering stripe slightly darker than the rest, beginning in two transversely placed black spots at the fore extremity, and margined by a slender dusky line on each side, the two lines coalescing about halfway towards the hinder end; on each side of this central stripe is a narrow wavy whitish band, slenderly margined with a broken blackish line or series of linear spots. The abdomen was much shrivelled, and thus its exact colours and pattern were rendered very indistinct.

*Hab.* GUATEMALA, Coban (*Sarg*).

## WAMBA *, gen. nov. (fam. Theridiidæ; subfam. Asagenæ).

*Cephalothorax* short, broad-oval, length slightly greater than breadth; profile-line forming an even curve. Height of clypeus equal to half that of the facial space, and strongly impressed by a transverse indentation immediately below the fore-central eyes; the indentation at the thoracic junction is transverse and slightly curved, the convexity of the curve directed backwards. Caput of great size compared to the thoracic portion. Lateral impression at the junction of the caput and thorax very slight.

*Eyes* unequal, large, in two curved transverse rows, occupying the whole width of the caput, forming a very large area, and tolerably closely grouped together. The slight curve of the posterior row is directed backwards, the stronger curve of the anterior row forwards; laterals contiguous and, as also the fore-centrals, seated on tubercles.

*Legs* moderately long, rather slender, 1, 2, 4, 3, first and second pairs much the longest, furnished with numerous long hairs of a slender spinous nature; femora of the first and second pairs furnished with minute granulosities or slight tubercles (this may, however, be sexual).

*Palpi* short; digital joint and palpal bulb strongly Theridiiform.

*Falces* long, tolerably strong, slightly divergent.

*Maxillæ* long, strong, straight, inclined towards the labium.

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* Nom. propr.

*Labium* broad, broader than high, somewhat semicircular or rounded at the apex.

*Sternum* subtriangular, its posterior extremity produced into an obtuse point between and a little beyond the posterior coxæ.

*Abdomen* short-oval, nearly circular, moderately convex above, with a large circular corneous-edged cavity at its fore extremity, into which the connecting pedicle is inserted, and a semicorneous or coriaceous plate of considerable size beneath the fore extremity between the spiracular openings.

### **Wamba congener,** sp. n.

*Adult male*, length $\frac{2}{3}$ line, or $1\frac{1}{2}$ millim.

*Cephalothorax*, *falces*, *maxillæ*, *labium*, and *sternum* yellow-brown; *legs* pale yellowish, femora of 1st, 2nd, and 4th pairs yellow-brown; *palpi* similar to the legs in colour, digital joint yellow-brown. *Abdomen* dull pale yellow-brown, thickly spotted with small white cretaceous-looking spots, and with a large central somewhat quadrate patch of a rather darker hue on the upperside, roughly defined by a marginal broken line of black spots, and near the posterior margin of the patch four white spots form a straight transverse line; at the hinder extremity of the upperside there are also a few irregular black spots; spinners short, compact, those of the inferior pair much the strongest.

*Eyes* large, the hind-centrals, perhaps, rather the largest, and not quite circular in shape. The intervals between those of the posterior row are equal and not much more than half the diameter of one of the hind-centrals. The four central eyes form a quadrangle, whose anterior side is distinctly but not greatly longer than the posterior, the outer sides being about equal to the posterior side. The interval between those of the fore-central pair is about equal to two diameters, and each is near, but not contiguous, to the fore-lateral eye on its side. The eyes of the posterior row are all pearly-white.

*Palpi* short; radial joint rather longer than the cubital, and somewhat produced on the outer side; digital joint small, oval. Palpal organs simple, consisting of a small, not very prominent corneous lobe, with one or two small processes at their fore extremity.

*Hab.* GUATEMALA, Chicoyoito (*Sarg*).

## MAJELLA*, gen. nov. (fam. Thomisidæ; subfam. Aphantochilinæ).

This genus is closely allied to *Bucranium*, Cambr., but may be easily distinguished by the different position of the eyes: in *Bucranium* those of each of the two rows are equidistant from each other, while in the present genus the two centrals of each are nearly or quite double the distance from the laterals that they are from each other; the height of the clypeus is also greater in *Majella* than in *Bucranium*, and the cephalothorax is longer and flatter.

### **Majella affinis,** sp. n.

*Female* (*? adult*), length 2 lines.

*Cephalothorax* yellow-brown, much marked on the sides, but less on the caput, with deep rich red-brown (approaching to black) patches and suffusions. The surface is thickly covered with minute shining tubercles of a yellow-brown hue, with a few whitish-yellow tubercles of a much greater size and prominence, and each is surmounted by a short, strong, obtuse spine. Of these latter tubercles, five form a conspicuous angular line stretching across the clypeus; there are four others—one a little way behind each of the fore-central eyes, and one on each side inside the base of the prominences bearing the hind-lateral eyes,—one, much smaller, exactly midway between the hind-central eyes, and three, similarly small, in a transverse slightly curved line towards the occiput; behind these are two others just before the beginning of the thorax, much larger, but forming a shorter transverse line than the three in front of them, and each bearing two spines; one other tubercle, the largest of all, is situated on each side towards the hinder part of the thorax.

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* Nom. propr.

*Eyes* as in generic description. The laterals considerably larger than the centrals.

*Palpi* short, strong, similar in colour to the falces; digital joint very short, no longer than the radial, tapering and pointed at the extremity. The height of the clypeus is nearly two-thirds that of the ocular area; it is of great width, its sides (looked at from in front) very nearly parallel, and its anterior margin, which projects considerably over the base of the falces, is hollowed out, forming a wavy line, a little prominent in the middle, but more so at each of the anterior corners.

The *eyes* are unequal in size, in two transverse and about equally but not strongly curved lines, the anterior row shortest; the hind-lateral eyes are on a protuberance at the base of a short, strong, horn-shaped prominence of the caput; those of the hind-central pair are separated from each other by double the interval between each and the hind-lateral eye on its side; the fore-laterals, which are large (and of the same size as the hind-laterals), are at the base nearly in front of the horns, and the fore-centrals bear the same relative position to the fore-laterals as the hind-centrals to the hind-laterals.

*Legs* short, strong, tubercular, but not strongly so. The only specimen examined had lost all its legs but 1 and 4; those of the first pair are like the cephalothorax in colour, but the tibiæ are darker yellow, while the basal half of the femora and the tibiæ of the fourth pair are pale yellow, the rest of the fourth pair being yellow-brown.

*Falces* short, strong, subconical, projecting, and similar in colour to the cephalothorax.

*Maxillæ* like those of *Bucranium*, and similar to the cephalothorax in colour.

*Labium* long, very slender, and of a sharp-pointed tongue shape.

*Sternum* oval.

*Abdomen* of moderate size, and fitting up fairly close to the thorax; it is of a short, nearly circular form, a little truncated in front. The surface is coriaceous, tubercular, and of a mottled yellow-brown, dark reddish-brown, and black hue; it is covered with yellowish tubercles (like those of the cephalothorax), rather symmetrically disposed (about eight form a marginal row in front), and, like those on the cephalothorax, each is furnished with a short, strong, prominent spine of a broad somewhat chopper-shape; on each side toward the hinder part of the upperside is a largish, oblique, oblong, clear whitish-yellow patch. Some accidental adhesive substance obscured the greater part of the underside, concealing the genital parts and most of the sternum. The underside seemed to be of a uniform deep brown.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## DYSDERINA, Simon.

### Dysderina plena.

*Dysderina plena,* Cambr., anteà, p. 143, t. 17. figg. 7, 7 *a–d.*

The adult female only was described and figured above (*l. c.*). I have since come across the male; it resembles the female in all general characters, colour, and appearance, but is smaller, measuring 1 line in length.

The *palpi* are short; the digital joint is of great size, oval, tumid, and furnished with a few blackish hairs; the palpal organs are, so far as any separate bulb is concerned, conterminous with the joint, and no separating edge or fissure could be detected under a strong lens, but from beneath their extremity a small, dark brown, corneous process issues, consisting of a slightly bent stem enlarged and divided at its extremity into several irregular projections, of which one is sharply bent, blackish, and sharp-pointed; alongside of the stem, and issuing near its base, is a small, brown, tapering, sharp-pointed spine.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## ANDRASTA, Simon.

### Andrasta globosa, sp. n.

*Adult male,* length rather less than 1 line (about 2 millim.); *adult female*, length $1\frac{1}{4}$ lines (2·5 millim.).

*Cephalothorax*, *legs*, and *palpi* yellow; the tibiæ, tarsi, and metatarsi of the legs, and the radial and digital joints of the palpi (♀) tinged with orange-yellow-brown.

*Legs* short, 1, 2, 4, 3, furnished with a few longish spine-like bristles on the tibiæ of the first and second pairs.

*Eyes* rather large and subequal, those of the posterior row in the male in a straight line; in the female the line is very slightly curved, the convexity of the curve directed forwards. The four centrals form an oblong figure; the fore-central pair are very near together, but not contiguous to each other, the interval being a little less than that which separates each from the fore-lateral eye on its side; the hind-centrals are also very near but not contiguous to each other, and each is separated from the hind-lateral on its side by about double (or rather more) the interval which separates it from the hind-central next to it.

*Palpi* (of male) moderately long; cubital and radial joints very short, and presenting no marked feature; digital joint large, palpal organs very large, prominent, and highly developed, consisting of an enormous, roundish lobe or bulb at the base, with a congeries of black corneous processes beneath the fore extremity. The palpi of the female are destitute of any terminal claw.

*Falces*, *maxillæ*, and *labium* dull orange-yellowish.

*Abdomen* large, globular, white, with an irregular, elongate, black band or patch on each side of the upper part, leaving a somewhat angulated, large, white, tapering, longitudinal band between; this band is whiter than the rest, and has often an irregular, broken, black, central, longitudinal stripe on it. In some specimens these black markings are more or less obsolete.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith has the following note on this species:—"Glen, near a stream, on foliage; web geometrical, perpendicular, very coarse-meshed (twelve or thirteen radiating lines), and supported by long lines; about five inches in diameter; the spider in the centre." This description of its habits is very important, as the female has no terminal palpal claw, and though in many essential characters the spider is very close to the Theridiidæ, it is yet an orbicular web-spinner, forming with a few other congeners a connecting-link with the true Epeirids.

## ARGYRODES, Simon.

### **Argyrodes argenteo-maculata,** sp. n.

*Adult male*, length very slightly over 1 line.

The general form of the *cephalothorax* is of the ordinary type; clypeus roundly protuberant in the middle, the lower part of the protuberance somewhat of a peaked form, of a deep blackish-brown colour.

*Eyes* in two transverse strongly curved rows, the posterior row least curved; the fore-central pair on a strong prominence, wide apart, and largest of the eight, and with the hind-central pair form very nearly a square whose posterior side is a little the shortest; the interval between the hind-central pair is greater than that between each and the hind-lateral on its side.

*Legs* slender, first pair greatly the longest, 1, 4, 2, 3, clothed only with short fine hairs, which are of a dark brown hue; the two short basal joints, the lower extremities of the femora, the tarsi, and metatarsi are yellow, the greater part of the femora of the third and fourth pairs being yellow.

*Palpi* short, yellow, excepting the digital joint, which is dark brown; cubital joint short, bent, claviform; radial joint shorter and produced in an obtusely-ending form at its outer extremity, which is in close proximity to and of the same colour as the digital joint; this joint is of moderate size, clothed with coarse hairs, and of an oval form. The palpal organs are compact and simple, presenting no noteworthy features.

*Falces* long, moderately strong, straight, conical, and with the *maxillæ*, *labium*, and *sternum* (which are of a normal character) of a dark yellow-brown colour. Sternum triangular and convexly prominent.

*Abdomen* large, exceedingly and globularly elevated above, and with a distinct corneous rim round the insertion of the connecting pedicle; of a deep black or black-brown colour, with a large well-defined, somewhat triangular, silvery, shining patch on each side; the upper angles of the two patches slightly curved and almost meeting at the middle of the upperside; a round silvery spot on each side of the hinder extremity above the spinners, and two other spots close together some way above the others, in the median

line, and above again, a little way behind the point where the triangular patches join, is also a short transverse line formed by two small contiguous silvery spots; between these spots and the upper angles of the large silvery patches the colour is reddish-brown.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## PELAYO, gen. nov. (fam. Drassidæ; subfam. Anyphæninæ).

*Cephalothorax* broad-oval, longer than broad; lateral marginal impression at the caput slight, profile almost level; lateral margin of caput rather converging forwards; fore margin truncate; fore part of caput prominent, moderately and uniformly convex, hinder slope very abrupt; lateral indentations obsolete, thoracic indentation slight, linear, longitudinal; clypeus strongly impressed, about equal to the diameter of the fore-central eyes in height.

*Eyes* rather widely disposed, the anterior row shortest and seated upon the somewhat prominent fore part of the caput. The curves of both rows subsimilar, that of the anterior row rather strongest and their convexity directed forwards. The hind-central eyes are smallest, the hind-laterals largest, the fore-centrals rather larger than the fore-laterals. The four central eyes form a quadrangle a little wider than long, and its anterior side shortest; the interval between the hind-centrals is equal to about two and a half or three diameters, and each is two diameters from the hind-lateral eye on its side; the fore-centrals are rather more than half a diameter from each other, and about half that distance from the fore-laterals.

*Legs* rather short, subequal, 1, 4, 2, 3, tolerably strong, the femora of the first pair much the strongest, spinose, excepting the tarsi, which are somewhat incrassated; a thin scopula beneath the tarsi and metatarsi of the first and second pairs. Tarsal claws pectinated, and a claw-tuft beneath them.

*Falces* moderate in length and strength, straight, projecting forwards, with two or three small teeth on the upper margin at their inner extremity, which is thickly set with strong bristly hairs; the front near the base is prominent, and on the outer side at the base is a small, oval, shining prominence.

*Maxillæ* moderately long, straight, much the broadest at their extremity, which is rounded on the outer and rather obliquely truncated on the inner side; no transverse impression.

*Labium* rather higher than broad, a little the widest halfway up, and thence sloping to the apex, which is rounded. Its height is a little more than half the length of the maxillæ.

*Sternum* longer than broad, truncated before, its hinder extremity rather drawn out into an obtuse broad point between the coxæ of the fourth pair of legs.

*Abdomen* oval, somewhat flattened above. Spinners of the inferior pair stronger but shorter than the superiors, these two pairs apparently 3-jointed.

### **Pelayo lætus,** sp. n.

*Adult male*, length $1\frac{3}{4}$ lines.

*Cephalothorax* deep dusky yellow-brownish tinged with olive, very glossy, clothed thinly with fine hairs; falces darker than the cephalothorax, and furnished with long bristles on their inner sides in front.

The *maxillæ* and *labium* are similar in colour to the cephalothorax, and the *sternum* is of a pale greenish hue, with the posterior extremity maroon-brown, margined with bristly hairs.

*Palpi* short, furnished with spines and bristles, the former on the humeral, cubital, and radial joints very short and of equal length, the latter without any distinct apophysis; beneath the humeral joint at its fore extremity is an obtuse, bent, corneous apophysis directed fowards; digital joint large, oval; palpal organs simple, consisting of several curved corneous processes and spines.

*Legs* yellow-brown tinged with reddish; femora deep blackish-maroon-brown; tarsi and metatarsi of third and fourth pairs paler than the rest; the coxal and exinguinal joints are clear pale yellow.

*Abdomen* of a rather rich maroon-brown, with a large, oval, central, longitudinal, well-defined band of yellowish-white on the upperside, and another broad band of the same colour along the lower part of each side; these three bands do not reach the spinners, and all are clothed with short white hairs. Spinners maroon-brown, the bases of the four outer ones striped longitudinally with yellowish; plates of the spiracles yellowish-white. On the underside of the abdomen towards the spinners is a strong, straight, transverse slit or fold in the epidermis, no doubt indicating the aperture to additional spiracular organs.

*Hab.* Costa Rica (*Sarg*).

## CLUBIONA, Latreille.

### **Clubiona placens,** sp. n.

*Adult male*, length 1½ lines.

*Cephalothorax* broadish oval, broadly and squarely truncated in front; lateral marginal impressions slight, convexity moderate, profile-line slightly and continuously curved; height of the clypeus equal to the diameter of a fore-central eye. Colour dull orange-yellow, the ocular region, two broad lateral bands, and a tapering, elongate, central longitudinal band, from the ocular region to the thoracic junction, of a yellow-brown hue.

*Eyes* on black spots, in the normal two transverse curved rows; the curves, looked at from above and behind, are equal, the convexity of that of the anterior (or shortest) row directed forwards, and of the posterior row backwards. The eyes are subequal, those of the fore-central pair smallest, the rest nearly equal; those of the hind-central pair are separated by rather more than each is from the hind-lateral eye on its side, or nearly one and a half diameters; the anterior row, with the hind-laterals, form an exact segment of a circle, but not quite a semicircle. The interval between the laterals is small, that between the fore-laterals and fore-centrals less, and that between the latter (fore-central pair) scarcely more than half a diameter. The laterals are of equal size, and rather larger than the hind-centrals. The four central eyes form a square whose anterior side is shorter than the rest.

*Legs* moderate in length and strength, 4, 1, 2, 3, armed with long and rather slender spines, and yellow in colour.

*Palpi* moderately long, yellow, the digital joint yellow-brown; cubital joint short; radial joint nearly double the length of the cubital, with a small, tapering, sharp-pointed apophysis at its fore extremity on the outer side, and two longish spine-like bristles on the inner side; digital joint elongate-oval, its fore half drawn out into a longish somewhat cylindric form, slightly tapering, but obtuse at the end. Palpal organs not very complex; a strongish tapering spine springs from the inner side, curves round and over to the outer side and again back to the inner side, whence it ends in a fine point beneath the margin of the joint; near the base, on the anterior edge, of this spine is a small tooth-like prominence.

*Falces* tolerably long, moderately strong, straight, cut away towards their extremity on the inner side, where they are furnished with numerous strong bristly hairs and thinly covered with red-brown granulosities in front. Colour yellow-brown.

*Maxillæ* and *labium* normal in form, colour yellow-brown. *Sternum* yellow.

*Abdomen* oval, pointed behind, truncate in front, thinly covered with grey hairs; pale dull yellow in colour, with a series of five or six pairs of rather elongate oblique brown spots (being the remains of the normal angular bars or chevrons) on the hinder half of the upperside, and some indistinct brownish markings on the fore half. Spinners normal, yellow.

*Hab.* PANAMA (*Sarg*).

### **Clubiona simplex,** sp. n.

*Adult male*, length 3⅓ lines.

This spider is of normal form and appearance. The cephalothorax, legs, and palpi are pale orange-yellow, the former clothed with greyish hairs; falces dark reddish-yellow-brown; maxillæ and labium yellow-brown, sternum yellow, and abdomen luteous-yellow.

*Eyes* in normal position, the quadrangle of the four centrals broader than long, and the anterior side narrower than the posterior. The fore-central pair are larger than the fore-laterals, and largest of the eight; the rest subequal, the hind-centrals perhaps smallest. The height of the clypeus is very small, the fore-central eyes being almost close to the margin. The interval between the hind-centrals is considerably greater than that between each and the hind-lateral eye next to it.

*Legs* moderately long and strong, 4, 2, 1, 3, not greatly different in length; a thin scopula beneath the tarsi and anterior portion of the metatarsi of the first two pairs; spines normal. Each tarsus ends with a compact claw-tuft springing from a very distinct supernumerary (or claw) joint.

*Palpi* moderately long, rather strong. The humeral joint has three not very long but strongish pale spines of equal length in a short transverse row near its fore extremity on the upperside, and a little way behind them a single spine, longer and rather stronger. Cubital joint short, somewhat tumid in form above

or a little clavate. Radial joint considerably longer than the cubital, of a curved form (in profile), furnished with coarse hairs and bristles; a small obtuse red-brown prominence at its fore extremity beneath; another in front of it, *i. e.* at the side of the joint, broader, stronger, and rounded at its extremity, and close in front of this is a long, strong, somewhat flattened apophysis, about half the length of the joint; this apophysis widens rapidly, and its hinder corner is considerably produced, ending in a furcate form, its inner (or fore) corner has a sharp dentiform point, and there are two other dentate points on the fore margin of the apophysis between it and the furcate extremity. Digital joint large, oval, furnished with coarse hairs, those on the anterior portion of equal length and densely grouped in a tuft-like mass; at its base on the outer side the digital joint is produced, with an obtuse or rounded termination of a semicorneous appearance, and thence the whole of the outer margin of the joint is corneous-looking, as though bound round by an adherent spine. The palpal organs are not very complex, but greatly developed; a large semicorneous-looking septum or lobe, flattened on the outer side, convex on the inner, runs, keel-like, from end to end of these organs, its profile being somewhat circularly rounded, and its margin having a closely-fitting red-brown somewhat filiform spine all round it; this spine issues from the base (or hinder extremity) of the palpal organs and tapers rapidly, ending at the anterior extremity of the septum, along the outer side of which, near the outer margin of the joint, are two long, obtuse-ended, corneous processes.

*Falces* long, strong, tapering, slightly divergent, furnished with numerous dark red-brown granulations and coarse bristles in front. The inner margin of the falces is canaliculate, with teeth on each edge.

*Sternum* of a narrow-oval form, ending behind in a tolerably sharp though short point between the coxæ of the fourth pair of legs, which are well separated by rather less than half a diameter's interval.

*Abdomen* elongate-oval, subcylindric, generally luteous-yellow, but dull orange-yellow on the fore half of the upperside, clothed with pale grey hairs. Spinners compact, prominent, of normal length and strength, the inferior pair longest.

*Hab.* GUATEMALA, Yzabal (*Sarg*).

## THWAITESIA, Cambridge.

### Thwaitesia affinis.

*Thwaitesia affinis,* Cambr. P. Z. S. 1882, p. 431, t. 31. fig. 8 *a*.

The female only of this spider (from the Amazons) has been described, and a small portion of its structure figured (*l. c. suprà*). It seems worth while, therefore, to give, along with a description of the male, figures illustrating the general appearance of this delicate and lovely species.

In colour and markings the male resembles the female. The *cephalothorax*, legs, palpi, falces, maxillæ, labium, and sternum pale yellow; the anterior extremity of the tibiæ and metatarsi of the first and fourth pairs of legs tinged with orange-brown. Abdomen of a duller yellow hue than the rest, spotted above and on the sides with largish pearly-silver plate-like spots, leaving an elongate bare stripe along the middle of the fore-half of the upperside; the conical elevation of the upperside is far less in height than in the female, the abdomen being thus much longer in proportion to its height in the male.

The *palpi* are tolerably long; the cubital joint slightly bent, and, among other hairs, has a long bristle at the fore extremity on the upperside; the radial joint is nearly double the length of the cubital, and increases gradually from the posterior to the anterior extremity, it is furnished with long, slender, pale bristly hairs; digital joint oval, of moderate size, its base equalling the fore extremity of the radial joint in width. Palpal organs moderately complex, consisting of a large central corneous process, and with a black, circularly curved, tapering spine running from another process near the base round the hinder part and lower side. There are also two or three small corneous processes at the fore extremity immediately beneath the fore end of the digital joint.

The *legs* are 1, 4, 2, 3—1 and 4 being greatly longer than the rest.

*Hab.* PANAMA, Bugaba (*Champion*).

This spider is (as remarked *l. c. suprà*) very nearly allied to the Ceylon species,

*Thwaitesia margaritifera*, Cambr., but the male above described may be readily distinguished by the different relative proportion of the radial and cubital joints of the palpi. In the Ceylon spider the cubital is a little longer than the radial, whereas in *T. affinis* the latter is nearly double the length of the former. The palpal organs are very similar in the two species.

## Thwaitesia vittata.

*Achæa vittata*, Cambr. anteà, p. 130, t. 17. fig. 11.

By an inadvertence this spider was (*l. c. suprà*) described as an *Achæa*, from which genus it is widely removed.

In his work 'Die Spinnen Amerikas: Theridiidæ,' 1884, the late Count Keyserling appears to have quite misapprehended the typical characters of the genus *Achæa* (Cambr.) and to have described there (under *Achæa*) several species nearly allied to *Thwaitesia vittata*. This last I believe to belong to the genus *Thwaitesia* as originally characterized. According to M. Simon ('Hist. Nat. des Araignées'), *T. vittata* and others (included, as above mentioned, by Keyserling under *Achæa*) should be retained under *Theridion*, while *Thwaitesia* is kept for the type *T. margaritifera*, Cambr., and one or two others scarcely specifically different from it. The whole group, *Theridion*, Walck., has presented immense difficulties which cannot be satisfactorily surmounted without the careful study of far more materials from tropical regions than we have yet received, while at the same time—paradoxical as it sounds—it is the abundance of recent additions to our collections from the tropics which has mainly created the difficulties. *Theridion*, as restricted now by M. Simon, seems to me an utterly unworkable group.

## Thwaitesia lepida, sp. n.

*Adult female*, length—to summit of abdomen $3\frac{1}{2}$ lines, from spinners to falces 3 lines, from summit to spinners nearly $2\frac{1}{2}$ lines.

*Cephalothorax* rather longer than broad; lateral marginal impressions at caput slight, upper convexity small. Caput no higher than the thorax; thoracic indentation large and deep; indentations at junction of caput and thorax strong; ocular area a little prominent; clypeus strongly impressed transversely below the eyes, prominent at the lower margin, which is well rounded, its height considerably exceeding half that of the facial space; colour dull yellow-brown, hinder part of caput a little paler; junction of caput and thorax marked with a blackish spot.

*Eyes* normal, subequal, scarcely differing in size; posterior row, looked at from above and a little behind straight, the two centrals considerably nearer together than to the hind-laterals; central quadrangle forming almost a square, slightly broader than long; curve of anterior row not very strong, its convexity directed forwards; interval between the fore-centrals much greater than that between them and the fore-laterals.

*Legs* long, moderately strong, unequal, 1, 4, 2, 3, those of the first pair about three and a half times the longest length of the spider. Colour pale yellow, distinctly annulated, chiefly at the extremities of the joints, with dark red-brown, approaching in some parts to black; the femora of the first and second pairs are also marked with small dark brown linear spots, some forming almost a continuous line. They are furnished with hairs only.

*Falces* moderate in length and strength, straight, similar in colour to the cephalothorax.

*Maxillæ* strong, straight, a little inclined towards the labium, of a dark brown colour.

*Labium* more than double as broad as it is high, somewhat semicircular.

*Sternum* somewhat subtriangular, heart-shaped, much longer than broad, its posterior extremity gradually drawn out, but its end truncated. Colour (with the labium) deep black-brown.

*Abdomen* large, looked at in profile triangular, the posterior part being produced gradually into a conical point at the beginning of the hinder slope, which is almost vertical, and equal in length to the length of the abdomen on the underside. It is dull yellowish-brown in colour, marked with white stripes, spots, and markings; the larger spots and markings are along each side of the median line of the upperside, leaving a longitudinal band sprinkled with minute white spots. This band, ill-defined, contains near the middle four black spots in a quadrangle, longer than broad, and narrowest behind; at the hinder extremity of the band is a dark brown patch reaching to the highest point of the abdomen; the sides and hinder slope are striped nearly vertically with long and short white stripes. The underside is jet-black, interrupted a little in front of the spinners and forming there a black triangle with a pale spot in the middle of its base; four bright white spots in a square surround the spinners, and on each side near the spiracular openings is a large white spot or patch. The spinners are short, strong, and compact. The genital aperture is rather obscured, but is of characteristic form.

*Hab.* GUATEMALA, Cahabon (*Sarg*).

Mr. Sarg has the following note on this spider—"Caught in its circular web on bushes." As this spider is undoubtedly of the family Theridiidæ, and very near to *Theridion*, this note—if taken to show that the spider spun the web in which it was found, and that it was a geometric one—is of great importance, since no true Theridiid is yet known to spin a geometric snare.

## TEUDIS, gen. nov. (fam. Drassidæ; subfam. Anyphæninæ).

*Cephalothorax* longer than broad, but not greatly so, very broad and almost squarely truncate in front; lateral marginal impressions at the caput slight; normal indentations slight, upper convexity moderate, hinder slope rather abrupt, profile almost level, very slightly curved; clypeus equal in height to the diameter of the fore-lateral eyes.

*Eyes* subequal, fore-centrals smallest, the rest almost equal, in two transverse slightly curved rows, the anterior row shortest, the curves about equal, the convexity of the anterior row directed forwards, that of the posterior row backwards; those of the hinder row equally separated, of the anterior row nearly so; the central quadrangle as broad as long, but much narrowest in front.

*Legs* moderate in length and strength, 1, (those of the second pair are broken off), 4, 3 (probably the second are slightly longer than the fourth, or at all events not shorter), armed with strongish spines, but not regularly disposed; hairs coarse, long, prominent, especially on the metatarsi and tibiæ of the first and (probably) the second pairs. Tarsal claws 2, 4–5-denticulate, with a not very dense claw-tuft. Scopula absent.

*Falces* long, strong, slightly tapering, straight, porrected, excavated along the basal two-thirds of the inner margin; fang long, strong, articulated not quite horizontally, but a little obliquely, and when at rest lying along almost underneath the falx, as in *Delozeugma*, Cambr. Teeth beneath the falces minute, but with a strong denticular prominence about the middle, with numerous strong bristly hairs between it and the articulation of the fang.

*Maxillæ* long, strong, straight, slightly divergent, narrow at the articulation of the palpus, broad and rounded at the extremity, blunt-angled on the outer, obliquely truncated on the inner side.

*Labium* much longer than broad, and more than half the length of the maxillæ; sides nearly parallel, a little converging at the apex, which is deeply emarginate.

*Sternum* oval, truncate before, slightly and obtusely produced behind, between the posterior coxæ, which are separated by a space equal to their diameter. On the middle of the underside of the abdomen is a very distinct transverse oval opening to, no doubt, a spiracular organ.

This genus has affinities with *Delozeugma*, Cambr., and *Chiracanthum*, C. L. Koch, also with *Anyphæna*, Sund.

### **Teudis gentilis,** sp. n.

*Adult male*, length $2\frac{2}{3}$ lines.

*Cephalothorax* yellow-brown tinged with reddish, veined with black-brown, indicating the normal grooves and indentations, and clothed, but not densely and apparently mostly on the sides and hinder slope, with fine whitish adpressed hairs.

*Eyes* of posterior row separated by distinctly but not greatly more than a diameter's interval. The interval between the fore-centrals is rather less than a diameter, each being also rather nearer to the fore-lateral on its side; the interval between the laterals is about equal to the diameter of the fore-centrals.

*Legs* orange-brown, blotched, spotted, and somewhat irregularly annulated with black-brown.

*Palpi* moderately long, yellow, furnished with hairs and bristles, and several spines on the humeral, radial, and cubital joints; on the two latter these spines are of a bristly nature; radial joint longer than the cubital, greatly excavated on the outer side, prominent at its fore extremity outside, and with a strong bent but not very long prominence or apophysis on the same side near the base, tipped with a number of minute denticles, of which there are several others along the upper edge of the excavation; near the middle of the lower edge of the excavation is a prominent, bluntish, tooth-like point. Digital joint long, elongate-oval in form, as long as the radial and cubital joints together. Palpal organs compact, consisting chiefly of an oval bulb, and presenting no very remarkable features.

*Falces* nearly three-fourths the length of the cephalothorax, dark rich red-brown, somewhat granulose above and furnished with some short almost sessile spine-like bristles along the outer side.

*Maxillæ* and *labium* similar in colour to the falces.

*Sternum* yellow, suffused with reddish-brown, mostly towards the margins.

*Abdomen* small, somewhat cylindric-oval in form; of a dull orange-yellow hue, marked on the upperside pretty thickly with blackish longitudinal striæ, and other markings towards the sides and on the under part; along the middle of the fore part is an indistinct longitudinal blackish stripe, followed by two other indistinct nearly parallel lines of the same hue. The underside is marked with short blackish striæ or linear spots, and with a broad central longitudinal indistinct band of the same colour. Spinners short, compact, those of the inferior pair strongest and contained within a circular socket or rim.

*Hab.* GUATEMALA, Coban (*Sarg*).

### **Teudis mordax.**

*Delozeugma mordax,* Cambr. anteà, p. 182.

When describing this spider as a *Delozeugma* (*l. c. suprà*) I had not noticed an important point in its structure—the transverse opening on the middle of the underside of the abdomen closely resembling that of the genus *Anyphæna*. This appears to me clearly to separate it from *Delozeugma*, and to include it in the genus *Teudis*, with which it agrees also in other characters. There is, however, no doubt but that the two genera are nearly allied, and especially so in the articulation of the fangs to the falces.

## ANYPHÆNA, Sundevall.

### **Anyphæna larvata,** sp. n.

*Adult female*, length $2\frac{1}{3}$ lines.

*Cephalothorax* of normal form; colour pale yellow-brown, rather darker on the upperside, which is bounded by two lateral longitudinal reddish-brown stripes; fore part of the caput (including the ocular area and clypeus) deep rich red-brown, fading off on the sides into the less deeply-coloured lateral stripes; height of the clypeus equal to the diameter of the fore-central eyes.

*Eyes* subequal, in ordinary general position; the four centrals form a quadrangle whose anterior side is shorter than the posterior, the other sides being almost if not quite equal; the posterior row is slightly curved, the convexity of the curve directed backwards; the anterior row a little more curved, and its convexity

directed forwards; the intervals between the eyes of the posterior row are nearly equal, being a little more than a diameter between the central pair and rather less between each and the hind-lateral next to it. The fore-centrals are smallest, the interval between them is less than a diameter, and that between each and the fore-lateral next to it is distinct but very small; the interval between those of each lateral pair is equal to the diameter of one of the fore-central eyes. The fore-laterals are slightly the largest.

*Legs* neither very long nor strong, 4, 1, 2, 3; colour rather orange-yellow; the femora, excepting a patch at the base in front, the fore part of the genuæ, and the tibiæ and metatarsi of the first pair are deep red-brown; the second pair are somewhat similarly coloured, excepting that they have a more annulated appearance; the third and fourth pairs are yellow; beneath the tibiæ of the first two pairs of legs are two pairs of long spines, and beneath the metatarsi one pair; a claw-tuft beneath the tarsal claws.

*Falces* strong, straight, somewhat cylindric, slightly tapering; deep rich red-brown, almost black.

*Maxillæ*, *labium*, and *sternum* normal, colour yellow.

*Abdomen* pale dull yellowish, with some faint traces of darker broken angular markings or chevrons on the hinder part of the upperside; these are, perhaps, more strongly marked in other examples. The normal transverse spiracular opening beneath the abdomen is very obscure. Genital aperture small, inconspicuous, and of a transverse-oblong form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## **Anyphæna puta,** sp. n.

*Adult female*, length 5–5½ lines.

This spider is of a nearly uniform yellow colour, the cephalothorax showing traces of two longitudinal lateral bands and a short, central, tapering, darker band; the abdomen is palest and dullest in hue, the rest tinged with orange. In general form and structure it is normal.

The *eyes* are in two transverse, not very strongly curved rows; the convexity of the anterior row is directed forwards, that of the posterior row backwards. The interval between the hind-central pair is distinctly but not greatly (about half) larger than a diameter, and is also greater than that which separates each from the lateral eye of the same row next to it; that between the fore-centrals is equal to a diameter, and is also greater than that between each and the fore-lateral eye next to it. The central quadrangle is slightly longer than broad, but much narrowest in front. The height of the clypeus is about equal to the diameter of the fore-central eyes. The eyes of the anterior row, together with the hind-laterals, form an even and exact crescent, almost a semicircle.

*Legs* moderate in length and strength, 1, 2, 4, 3, armature normal. Scopula beneath the tarsi of all four pairs and also the metatarsi of the first and second. Claw-tuft rather strong and compact; dorsal claws issuing from a claw-joint.

*Falces* moderately long and strong, straight, projecting forwards, tapering, furnished in front with numerous long bristly pale hairs.

*Abdomen* elongate-oval, pointed behind, destitute (in the two examples examined) of pattern. Transverse spiracular opening on the middle of the underside not conspicuous, curved, the convexity of the curve directed forwards. Genital aperture small, but of very characteristic form.

*Hab.* COSTA RICA (*Sarg*).

## **Anyphæna proba,** sp. n.

*Adult male*, length slightly over 2½ lines.

This spider is of normal form. The *cephalothorax* is dull orange-yellow brown.

*Legs* paler, palpi, falces, maxillæ, labium, and sternum similar in colour to the cephalothorax. The abdomen dull luteous.

The *eyes* are rather large for this genus, those of the posterior row equal, the fore-laterals largest, the fore-centrals much the smallest. The curve of the posterior row is slight, its convexity directed backwards that of the anterior row is directed forwards. The eyes of the posterior row are equally separated, those of the fore-central pair by half a diameter, and each of the latter from the fore-lateral next to it by a distinct but very small interval. The height of the clypeus equals the diameter of one of the fore-central eyes.

*Legs* moderate in length and strength, armed with normal spines, and a claw-tuft beneath the tarsal claws.

*Falces* rather long, strong, a little tapering, and slightly divergent at the extremities.

*Palpi* moderately long; cubital joint rather clavate, with a long and strong spiny bristle at the fore extremity on the upperside, and two others less strong near the hinder extremity. Radial joint longer and stronger than the cubital, some long strong spiny bristles in front; at the fore extremity on the outer side is a strong prominent apophysis, somewhat constricted in the middle, wider at the extremity than at the base, of a somewhat flattened form, and truncated at the extremity, the upper corner being sharp, the lower one rounded; beneath this apophysis is another, more massive, but shorter and obtuse at the end, and springing from the same general prominence as the upper apophysis; behind these, on the underside of the radial joint, are numerous long coarse pale hairs. The digital joint is of large size, and covered with long strong bristly hairs, some of the longest and strongest and of a pale colour being ranged along the outer margin of the joint; its length is equal to that of the humeral joint; at its base, rather on the outer side, is a strong subconical prominence. The palpal organs are highly developed, consisting of several strong corneous processes, of which one is of a tapering form, and extends forwards with its slightly bent point beneath the fore extremity of the joint.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

The example from which the above description has been made was in too bad a state of preservation to enable any details to be given of some points of structure; in fact, the extra apparent size of the eyes may perhaps be owing to the partial separation of the epidermis and cornea of the eyes from the new cuticle and cornea forming underneath. The form and structure, however, of the palpi, which are very striking, and had not suffered, will be sufficient for the easy determination of the species.

### **Anyphæna gibba,** sp. n.

*Adult male*, length $2\frac{1}{3}$ to 3 lines.

This spider is of normal form and general structure.

*Cephalothorax* yellow-brown, with a fine black marginal line; two well-defined longitudinal bands run backwards on either side of the median line from the lateral eyes to the posterior extremity; a fine deep red-brown central longitudinal line runs forwards from the thoracic indentation; on each side of the fore extremity of this line is a linear deep red-brown spot, and from near these on the inner side is a dusky yellow-brown short stripe running to the hind-central eyes. Height of clypeus rather greater than the diameter of the fore-central eyes.

*Eyes* on black spot, general position normal. Central quadrangle almost equal in length and breadth, slightly longer than broad, but the fore side much the shortest. Eyes of posterior row equidistant from each other; the fore-central pair much the smallest.

*Falces* moderate in length and strength, similar to the cephalothorax in colour, with two dusky brown longitudinal lines in front of each, the inner one curved, the outer more nearly straight, the two enclosing an irregular oblong figure. Their inner sides towards the extremities are furnished with numerous strong bristly hairs.

*Legs* rather long, 1, 4, 2, 3. Spines normal, colour yellow, the femora, genuæ, and tibiæ thinly marked with minute dusky spots.

*Palpi* similar to the legs in ground-colour; the humeral joint has three short strongish spines in a transverse line near the fore extremity on the upperside, and a longer and stronger one about the middle of the joint; cubital joint moderately long, somewhat bent and clavate, with a strong spine-like tapering bristle in front at the fore end; radial joint slightly longer than the cubital, furnished with some strong spine-like bristles, and with a large obtuse prominence near the middle on the underside, and a large peculiarly-shaped apophysis at the extremity on the outer side, of a shining dark red-brown colour, and as long as the joint itself (figures only can give any satisfactory idea of its form); digital joint large, oval, equal in length to the radial and cubital joints together; palpal organs highly developed, prominent and moderately complex in structure.

*Maxillæ*, *labium*, and *sternum* yellow.

*Abdomen* oval, pointed behind; ground-colour dull luteous-yellowish, on each side of the median line of the

fore part above is a well-defined curved black-brown stripe, the convexity of the curves of each of the two stripes directed outwards, and following these is a series of rather strong well-defined, though almost contiguous, angular bars or chevrons, reaching to the spinners; on the sides of the abdomen are a few scattered small blackish spots, and a broken marginal line divides them from the underside, which has a central longitudinal dusky blackish stripe, from the spinners to the transverse spiracular opening; near the middle the superior spinners are black.

*Hab.* MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

### **Anyphæna gibbosa,** sp. n.

*Adult male*, length 3 lines.

This spider is very closely allied to *A. gibba* (p. 201), resembling it closely in size, colours, and markings, but the form of the radial joint of the palpus and the structure of the palpal organs present differences which serve to distinguish it with certainty. On a comparison of the figures given of each from the same point of view this is at once apparent. Some other minor points may, however, be noted: the eyes of the hind-central pair are a little further from each other than from the hind-laterals; and the abdominal markings are rather more intensified and clear, and the sides are more thickly marked with short linear black spots. On the outer side (mostly rather behind the exinguinal joint) of the palpus is a closely-set group of short curved spines, against which it is possible that the coxæ of the first pair of legs may work and produce stridulations. These spines exist also in *A. gibba*, though without removal of the palpus or legs it is not easy to observe them. Beneath each of the coxæ of the legs of both this spider (male) and *A. gibba* is a group of short spine-like bristles; those on the third pair of legs surmount a strong subconical protuberance of the joint; those on the first pair would be well placed for traversing the group noted on the exinguinal joints of the palpi for the purpose of stridulating. Like *A. gibba*, the present species has a strong prominence beneath the radial joint of the palpus, but it is stronger than in *A. gibba* and nearer to the posterior end of the joint.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

An adult female accompanied this spider, and very possibly may be of the same species, resembling the male in size, colours, and markings, while at the same time it may possibly be the female of some other very nearly allied form. The genital aperture, as usual, is of characteristic form.

### **Anyphæna subgibba,** sp. n.

*Adult male*, length rather over $1\frac{3}{4}$ lines.

In general appearance, colours, markings, and structure this species is very similar and nearly allied both to *A. gibba* (p. 201) and *A. gibbosa* (suprà). It is, however, smaller. The legs are almost unspotted. The central quadrangle of the eyes is as broad as long, if not slightly broader, and the interval between the hind-central pair is distinctly, though not much, greater than that between each and the hind-lateral eye next to it, being very nearly equal to a diameter. The height of the clypeus is equal to the diameter of a fore-central eye.

The *palpi*, as in both the other species mentioned, have a strong protuberance beneath the radial joint, but it is nearer to the posterior extremity of the joint than in *A. gibba*, and less strong than in *A. gibbosa*, this joint and the cubital being scarcely different in length. The radial joint has also a long strong apophysis at its fore extremity on the outer side, of a bifid or furcate form, the posterior limb longest and strongest, the anterior rather bent and pointed; the palpal organs appear to be rather less complex than in *A. gibba* and *A. gibbosa*. The humeral joints of the palpi, like those of these two species, have each three spines in a transverse row at the fore extremity on the upperside, and another longer one a little way behind. The coxæ of the third pair of legs are strongly protuberant, but not so conical as in the other species. All the coxæ, excepting those of the fourth pair, are furnished with a group of short spines, as in *A. gibba*, &c.; the exinguinal joints of the palpi are also similarly furnished.

*Hab.* GUATEMALA, between Petet and Chicoyoito (*Sarg*).

## Anyphæna judicata, sp. n.

*Adult male*, length $1\frac{3}{4}$ lines.

Closely allied to *A. subgibba*, which it resembles very nearly in size, colours, and markings. The legs are slightly spotted, the spots having the appearance of the remains of a slight and irregular annulation. The central quadrangle of the eyes is as broad as long, but much narrowest in front; the interval between the hind-central pair is distinctly greater than that between each and the hind-lateral eye next to it, being equal to an eye's diameter, and the height of the clypeus is equal to the diameter of a fore-central eye.

The *palpi* differ remarkably from those of *A. subgibba* (as well as from those of the other species described above). The radial joint is rather longer than the cubital, and the prominence beneath is less strong and placed quite at the hinder extremity. The apophysis at its fore extremity on the outer side is bifid; the posterior limb is as long as the joint, strong, and of a somewhat sinuous form, directed downwards, broadest and obtuse near the extremity; the anterior limb is much shorter, and in fact of a bifid or somewhat crescent shape, the upper limb of the crescent being obtuse, the lower pointed (but, as before remarked, nothing except figures from a similar point of view can give an adequate idea of the form of these portions of structure or of their differences in the various species). The digital joint is large, as long as or longer than the humeral joint; the palpal organs are moderately complex, resembling those of the nearly allied species, but differing a little from them in structure. The exinguinal joints are also furnished with spines as in *A. subgibba*, &c.

*Hab.* MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

## Anyphæna excepta, sp. n.

*Adult female*, length $2\frac{1}{4}$ lines.

In respect to size, colours, and markings, this spider might well be the female of either *A. subgibba* or *A. judicata* (suprà), while, on the other hand, from differences in the position of the eyes, it would just as probably be the female of some other quite distinct species.

*Legs* very thinly spotted. *Eyes* on black spots, central quadrangle broader than long, much narrowest in front; interval between those of the hind-central pair distinctly greater than that between each and the hind-lateral eye next to it, being distinctly more than a diameter; height of clypeus equal to, if not a little greater than, the diameter of a fore-central eye. The genital aperture is of characteristic form.

*Hab.* GUATEMALA, Coban (*Sarg*).

## Anyphæna simplex.

*Anyphæna simplex*, Cambr. anteà, p. 124, t. 18. fig. 2.

*Anyphæna clubionoides*, Cambr. anteà, p. 184.

Further examination and comparison have shown that the above, described (*l. c.*) as separate species, are not really distinct, the smaller size of the type-specimen of the latter, with some other slight differences, not supporting the first opinion.

## THERIDION, Walckenaer (part.).

## Theridion munifex, sp. n.

*Adult female*, length $1\frac{1}{2}$ lines.

*Cephalothorax* oval, broad behind, narrowing rapidly forwards, upper convexity moderate, profile on a level almost, but a little prominent at the beginning of the hinder slope, lateral marginal impressions at the caput slight; clypeus narrow, but obtusely rounded at its lower margin, strongly impressed transversely below the eyes. Caput rather prominent in front, height of clypeus half that of the facial space; thoracic

indentation somewhat rounded and rather deep. The colour of the cephalothorax is yellow-brown, the sides and caput suffused with blackish-brown.

*Eyes* of tolerable and nearly equal size; fore-centrals smallest; those of the central quadrangle seated round the base of a strong hemispherical prominence, the quadrangle being rather longer than broad. The curve of the posterior row is slight, and its convexity, looked at from above and behind, is directed forwards; the intervals between the eyes of this row are equal, being rather more than half the diameter of the hind-centrals; those of each lateral pair are placed slightly obliquely on a strongish tubercle and nearly contiguous to each other. The interval between the fore-centrals is a diameter, and each is separated from the fore-lateral on its side by a very small but distinct interval.

*Legs* not very long, moderately strong, 1, 4, 2, 3. Their colour is yellow, the fore half of the femora and tibia and the genuæ dark brown. The anterior portion of the tibiæ is slightly and gradually incrassated, forming a noticeable contrast to the slender, cylindric form of the metatarsi. The legs are furnished with hairs only.

*Palpi* short, slender, of a dull yellowish colour suffused with dusky, and terminating with a bent claw, furnished on its inner side with 2–3 slender pectinations.

*Falces* moderate in length, rather projecting forwards, weak, tapering; similar in colour to the cephalothorax.

*Maxillæ* and *labium* normal, and with the sternum of a yellow-brown hue.

*Sternum* much longer than broad, narrow, heart-shaped, posterior extremity broad and rounded, the interval between the coxæ of the fourth pair of legs being equal to the width of the joint.

*Abdomen* oval, upper convexity considerable but not excessive; upperside black, containing, from end to end, a large pale somewhat angulated or frondose area, minutely speckled with white; along the centre of this are some black spots and markings, one a little way above the spinners is distinctly cruciform, and above that again is a transverse black line, angulated and traversing the whole of the pale area. The underside is of a dull hue, with a broad longitudinal central brown band, margined on each side with a whitish line. The genital aperture is small and of simple but characteristic form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## **Theridion rostratum,** sp. n.

*Adult female*, length $1\frac{1}{3}$ lines.

*Cephalothorax* short-oval; profile somewhat uniformly curved to the anterior eyes; a slight angle at the beginning of the hinder slope. Caput rather prominent; clypeus much impressed below the eyes, but prominent in a drawn-out flattish, obtuse, beak-like form at its lower margin; its height appears to be about half that of the facial space; lateral marginal impressions at the caput slight. Colour yellow-brown, the upper part of the caput and the sides of the thorax suffused and marked with black-brown; in some examples a distinct oblong black-brown band includes the eyes, and ends at the beginning of the posterior slope, and the dark lateral margins are better defined.

*Eyes* of moderate size, subequal, occupying the whole of the fore extremity of the caput and forming a broad transverse oval figure; the anterior row is the most curved, the convexity of its curve directed forwards, that of the posterior row backwards; the four centrals form a right-angled quadrangle, whose length is rather greater than its width; the interval between the hind-central pair is slightly greater than a diameter, and each is rather nearer to the hind-lateral eye on its side than they are to each other. The fore-centrals are separated by a diameter's interval, and each is divided from the fore-lateral eye on its side by a small but distinct interval. Those of each lateral pair are placed slightly obliquely on tubercles, and are contiguous to each other; all excepting the fore-central pair are of a bright pearly hue.

*Legs* rather short, 1, 4, 2, 3, moderately strong, not very unequal in length; colour dull orange-yellow-brown, annulated broadly but not vividly with blackish-brown; furnished with hairs only, a few being erect and of a bristly nature.

*Palpi* rather stout, similar to the legs in colour and markings, and terminating with a strongish, curved, and strongly pectinated claw.

*Falces* weak, similar in colour to the cephalothorax.

*Maxillæ* and *labium* normal, and similar to the cephalothorax in colour.

*Sternum* subtriangular, heart-shaped, obtuse at its posterior extremity, and with a low roundish prominence opposite to the insertion of each of the legs; colour similar to that of the cephalothorax.

*Abdomen* short-oval, very convex above; colour black, with a conspicuous central tapering longitudinal dentated white band on the upperside, and a slightly oblique white stripe on each side, behind which is a white spot, an elongate white spot also occupies the middle of the anterior extremity; in some examples the central band and lateral oblique white stripes are broken up into mere spots, and the ground-colour in those parts is then seen to be of a dull yellowish-brown. The underside is yellowish-brown, marked with black-brown. The genital process is rather prominent and of characteristic form, with a small round whitish projection in the middle. Spinners short, strong, compact. Colulus short, broad, a little broadest at the apex.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Chicoyoito (*Sarg*).

Mr. Sarg speaks of the spots on the abdomen (now quite white) as being pale yellow in life.

## **Theridion florens,** sp. n.

*Adult female*, length slightly over 1 line.

*Cephalothorax* of normal form; ocular area prominent and a little elevated; colour dark yellow-brown, with obscure darker converging lines and markings; lateral marginal impressions slight and gradual; clypeus equal to half that of the facial space, much impressed immediately below the eyes, and produced in a tapering obtusely rounded form at its lower margin.

*Eyes* very nearly of equal size, the laterals apparently rather the smaller and occupying a large area, the whole width of the fore extremity of the caput. The four centrals form a large quadrangle distinctly longer than broad; the slight curve of the posterior row has its convexity directed backward, that of the anterior row (which is very great) forward. The intervals between those of the posterior row are equal, being equal to the diameter of the hind-centrals; the direction of the lateral pairs, the eyes of which are contiguous, is at right angles to the posterior row. The fore-centrals are placed in front of a strong somewhat hemispherical prominence, and are separated by less than a diameter's interval, and each is very near but not contiguous to the fore-lateral eye next to it.

*Legs* rather short, 1, 4, 2, 3, moderately robust; colour brownish-yellow, suffused gradually with darker yellow-brown towards the anterior extremities of the femora and tibiæ; they are furnished with hairs and a few slender bristles.

*Palpi* short, slender, and similar to the legs in colour.

*Maxillæ* less directed over the labium than usual, otherwise normal.

*Labium* broad, scarcely one-fourth as high as it is broad; apex rather rounded at the corners; colour (with that of the maxillæ) yellow-brown.

*Sternum* subtriangular, heart-shaped, rather longer than broad; its posterior extremity a little drawn out, but roundly obtuse; the space between the posterior coxæ of the legs is equal to a diameter of the latter. Colour of the sternum yellow-brown suffused in parts with a deeper hue.

*Abdomen* large, almost globular, but pointed at the spinners. Colour dull brownish, with a large, jet-black, somewhat round-cornered quadrate area on each side of the upper part; between the fore extremity of these black patches are two longitudinal parallel rows of pale spots; the hinder part and a portion of the lower side (of the black patches) are edged with a conspicuous somewhat curved or subangular white line; these lines meet and form an angle at the middle of the abdomen; the hinder part of the abdomen has a strong black angular line or chevron followed by several short transverse black lines near the spinners; the sides also and the underside have some black markings or patches. Spinners short, compact, the superior pair yellow-brown, the inferior black. Genital aperture small, simple, and inconspicuous, but characteristic in form.

*Hab.* MEXICO, Tabasco (*H. H. Smith*).

This spider is nearly allied to, but quite distinct from, *Theridion migrans*, Keyserling,

which is a much larger spider and one which I have received both from the Amazons and Parana, S. America.

## **Theridion mixtum,** sp. n.

*Adult female*, length from rather less than 2 to nearly $2\frac{1}{2}$ lines.

This spider is allied to *T. fordum*, Keys., and others of that group.

*Cephalothorax* of ordinary form, yellow-brown, the ocular region, the hinder part of the caput, the thoracic indentation, some converging lateral lines, and other scratchy markings on the sides black-brown. The marking on the hinder part of the caput with that at the thoracic junction gives an exact representation of a tumbler standing on a stem. This marking is, however, also observable, though not so strikingly, in *T. fordum*.

*Eyes* normal; the central quadrangle is slightly longer than broad, a very little broader in front than behind; the fore-central eyes largest, the hind-centrals smallest, or about equal to the fore-laterals; clypeus strongly impressed immediately below the eyes, and very prominent at its lower side, exceeding in extent half that of the facial space.

*Legs* short, 1, 2, 4, 3, tolerably strong, yellow-brown or brownish-yellow, pretty closely marked with small deep reddish-brown spots, and with an annulus of the same colour at the anterior extremity of the femora, tibiæ, and metatarsi; femora at times more or less suffused with brown, the tarsi immaculate, yellowish, the metatarsi paler than the tibiæ and femora.

*Falces* neither very long nor strong, straight; colour yellow, tinged with reddish, and marked with a longitudinal dark reddish-brown straight stripe on the outer side, and a shorter somewhat curved one on the inner side in front.

*Maxillæ* and *labium* normal, yellow-brown, paler at the extremities.

*Sternum* subtriangular, margins strongly indented, corresponding with the fitting in of the coxal joints of the legs, and with a strong marginal prominence opposite to each of these joints. Colour reddish-yellow, with an indented black-brown marginal border.

*Abdomen* large, upper convexity very great; a subconical prominence at the highest point marks the posterior extremity of the upperside and the beginning of the hinder slope, the height of which is greater than the length of the abdomen: looked at in profile the abdomen (including that part which projects over the thorax) forms an almost equilateral triangle. The ground-colour of the abdomen is brightish red-brown, speckled more or less all over with minute yellowish points, and marked on the sides with two slightly oblique curved fine yellowish or whitish-yellow lines, more or less strongly margined, on one or both sides, with black; sometimes a third yellow line may be traced in front of the other two lines by a linear disposition of the small yellow spots. A still more distinct yellowish line than either of the rest runs perpendicularly from the summit of the subconical prominence (which is black) to close above the spinners, being crossed by several somewhat obscure pale yellowish and black angular lines or chevrons. The abdomen is paler along the median line of the upperside, and the upper ends of the anterior lateral yellow lines are united by a **W**-formed yellow transverse line; the surface in front of these lines is more or less suffused with black, but with the pale specklings still apparent. On the underside there is a pale reddish-yellow transverse linear marking just behind the genital process, and a larger one, of an obtuse-angled triangular form, a little in front of the spinners. The spiracular plates also are rather conspicuously yellow. The abdomen is rather thickly covered with short, coarse, rusty-yellowish hairs. The genital process is small but of characteristic form. Spinners short, compact, clear reddish-yellow-brown. No doubt age makes a difference in the darker or lighter general hue; one example was of a generally foxy-red colour, but it has all the characteristic markings quite distinct.

*Hab.* GUATEMALA, Chiacam (*Sarg*).

Though this spider is closely allied to *Theridion fordum*, Keys., the shorter legs and more densely pilose abdomen, and the subconical prominence at the upper extremity of the latter, will serve to distinguish it readily, besides its different general aspect and smaller size.

## **Theridion oblivium,** sp. n.

*Adult female*, length $2\frac{3}{4}$ lines.

*Cephalothorax* of ordinary form; ocular area rather prominent, especially the middle of the fore part; clypeus higher than half the facial space, much impressed below the eyes, prominent at the lower margin. Colour yellow-brown, strongly suffused and marked with a deeper hue.

*Eyes* in general normal position, occupying the whole fore part of the caput. The central quadrangle is considerably longer than broad, and distinctly wider in front than behind; the fore-centrals and hind-laterals appear to be the largest, the hind-centrals smallest, the interval between the latter, equal to nearly about an eye's diameter, being a little less than that which separates each from the hind-laterals; the slight curve of the posterior row is directed backwards.

*Legs* moderate in length and strength, 1, 4, 2, 3. They are yellow in colour, annulated (but not spotted) with dark, slightly reddish-yellow-brown, and clothed with numerous coarse hairs.

*Falces* not very strong, straight, yellow-brown, striped longitudinally with a deeper hue.

*Maxillæ* and *labium* dark yellow-brown, the latter much broader than high and emarginate at its apex.

*Sternum* longer than broad, subtriangular, with prominences opposite the insertion of the legs. It is yellow in colour, narrowly bordered with deep red-brown, in which the prominences form a series of blunt subconical points, three on each side and one at the hinder extremity.

*Abdomen* large, nearly equal in length and height at its highest part. At the beginning of the posterior slope is a distinct subconical prominence. It is yellow-brown in colour, somewhat symmetrically spotted and marked with white, black, and dark yellow-brown; the hinder slope is almost vertical, much spotted with dull yellow and whitish, and with a large irregular black marking on each side nearly halfway to the spinners; below these black patches on each side to the spinners is a close-set series of short transverse parallel deep brown lines. The underside is blackish, with a large central whitish marking, whose anterior side has two large angular indentations; behind this on each side near the spinners are two white spots. It is somewhat thickly clothed with coarse red-brown hairs. The genital aperture is small but of characteristically distinct form.

*Hab.* Costa Rica (*Rogers*).

This spider is somewhat similar to *Theridion tepidariorum* and *T. fordum*, Keyserling; but the subconical prominence on the abdomen (which allies it with *Theridion mixtum*) distinguishes it at once from both the other species named, and the unspotted legs separate it from *T. tepidariorum*.

### ARGYRODES, Simon.

## **Argyrodes aurea,** sp. n.

*Adult female*, length slightly over 1 line; length of abdomen on upperside $\frac{2}{3}$ line; height from spinners to upperside rather over $\frac{2}{3}$ line.

*Cephalothorax* of normal form; fore part of the ocular area broad and prominent; clypeus strongly transversely impressed immediately below the ocular area, but roundly prominent at the lower margin. Colour yellow-brown, suffused with blackish and with a marginal black line.

*Eyes* normal in general position. The convexity of the slight curve of the posterior row directed forwards. Central quadrangle broader than long, and perhaps slightly wider in front than behind; fore-lateral eyes largest; the hind-central eyes are nearly double as far apart as each is from the hind-lateral next to it. The height of the clypeus rather exceeds half that of the facial space.

*Legs* rather short, slender, 1, 2, 4, 3; those of the first pair much the longest. Colour of the first pair like that of the cephalothorax, with a narrow yellowish annulus at the hinder extremity of the tibiæ, the metatarsi being also yellow, with a narrow dark brown annulus at the fore extremity; the second pair are yellow, the tibiæ annulated with dark brown; the third and fourth pairs yellow.

*Falces* strong; similar in colour to the cephalothorax.

*Maxillæ* and *labium* normal and of a yellowish-brown colour.

*Sternum* subtriangular, obtusely pointed at the hinder extremity.

*Abdomen* large, very convex above, looked at from above and a little behind of a somewhat pentagonal form, truncated in front, much the broadest near the hind part; hinder slope abrupt, with a slight roundish prominence in the middle. It is of a pale somewhat golden-metallic hue, with a longitudinal central dull brownish stripe on the upperside, across the middle of which is a short black linear spot with a short black transverse stripe from each side near the end; looked at from behind the posterior slope presents a black spot on each side a little above the spinners, and from each spot a black curved line runs upwards. The genital aperture is of a characteristic form. Looked at sideways the abdomen forms nearly an equilateral triangle, the spinners forming the apex and the upper, strongly but not quite regularly curved, side the base.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## THERIDULA, Emerton.

### **Theridula tricornis,** sp. n.

*Female* (scarcely adult), length $1\frac{1}{4}$ line; breadth of abdomen $1\frac{1}{4}$ line.

This spider is closely allied to *Theridula multiguttata*, Keys., and also to *T. triangularis*, Keys. Its colours and markings distinguish it readily from the latter, and the shape of the abdomen from the former.

The *cephalothorax* is yellow, with a broken black marginal line and a broad central longitudinal band as wide as and including the ocular area, and widening as it runs backwards; this band is clearly and well defined, but at its posterior part its margins are obscured by a blackish suffused patch on the sides of the thorax.

The *eyes* are on a strong prominence of the fore part of the caput; the clypeus is greatly impressed beneath them, and prominent at its lower margin, and it appears to somewhat exceed half the height of the facial space. The central quadrangle is longer than broad and narrower behind than in front. The fore-central eyes are the largest, and separated by an eye's diameter, each being nearly contiguous to the fore-lateral on its side; the hind-centrals are separated by less than a diameter from each other, and by more than that from the hind-laterals. The eyes of each lateral pair are contiguous to each other. The posterior row has the convexity of its very slight curve directed forwards. The anterior row is greatly curved, owing to the prominence of the fore part of the ocular area.

*Legs* short; yellow in colour, furnished, but not very thickly, with prominent bristly hairs.

*Falces* moderately strong, straight, roundly prominent at their base in front. Colour yellow, suffused in front at their base with blackish.

*Maxillæ*, *labium*, and *sternum* yellow, slightly suffused with yellow-brown.

*Abdomen* large, broader than long, diamond-shaped, the lateral and posterior angles produced into rather fine, but not corneous, points. The lateral points are sharper than the posterior; under a strongish lens these points have a segmented appearance. Its colour is dull luteous-brown, marked with white; a large transverse slightly curved patch near the fore extremity and five large spots (three behind in a transverse row and two smaller in front), the hinder end, the rest of the upper surface, and the hinder slope being also speckled with minute white spots; the three angular points are blackish. Spinners short, compact.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## EPISINUS, Walckenaer.

### **Episinus bigibbosus,** Cambr.

Since the publication of the description of the female of this species (*anteà*, p. 167, t. 20. fig. 8), I have come across the adult male of it, a description of which is now subjoined:—

*Adult male*, length 2 lines.

In general characters, form, and markings the male resembles the female. In the only example seen, however, of the male the colours are all paler, probably owing to its having more recently effected its final moult. The legs are much longer and slenderer, 1, 4, 2, 3, and their annulations scarcely perceptible.

The *palpi* are very long, the cubital joint as well as the humeral long, and both are clavate. The radial joint is as long as, or even slightly longer than, the cubital, and rather less strong; its fore extremity joins in closely with the base of the digital joint, with which it coincides in breadth. The digital joint is oblong-oval, small; the palpal organs are well developed, complex, consisting of various characteristic well-compressed corneous spines and processes.

The *abdomen* has a well-marked pattern, consisting of a large black patch in the middle of the fore-end on the upperside, continued backward in a dull blackish longitudinal band, which divides into two diverging branches towards the hinder part, each branch ending at the outer side of the broadest part of the abdomen, where, in the female, there is a very characteristic round tuberculiform black prominence, divided into four by a pale cross-line; behind this on each side above the spinners is a transverse black line; these prominences are absent in the male, being represented by four black spots on a white ground in a quadrangle. Some spines, somewhat like those found on this part in the female, are also present in the male, but most of them had evidently been rubbed off.

The height of the clypeus is rather less than half that of the facial space.

*Hab.* PANAMA, Bugaba (*Champion*).

## ASAGENA, Sundevall.

### **Asagena mœsta,** sp. n.

*Adult female,* length 4 lines.

*Cephalothorax* longer than broad, well rounded at the anterior extremity; lateral marginal impressions at the caput moderate; height of the clypeus more than half that of the facial space; clypeus sharply and strongly impressed transversely immediately below the eyes, rounded and prominent at the lower margin. Its colour is deep blackish-red-brown.

*Eyes* subequal, the laterals largest, the posterior row straight, the curve of the anterior row directed forwards. The central quadrangle is a little longer than broad, and slightly wider behind than in front; the hind-central pair are nearer together than to the hind-laterals, the interval being equal to an eye's diameter. The eyes of the fore-central pairs are more than a diameter apart, but are nearer to the fore-laterals. Each lateral pair is seated on a strongish geminated tubercle, and its eyes are divided by a narrow but distinct interval. The fore-centrals are seated on a strong somewhat geminated prominence.

The *legs* are short, subequal, strong, 1, 4, 2, 3 or 1, 2, 4, 3, of a bright red-orange hue, the femora of the first and second pairs, and the basal portion of those of the third and fourth pairs, blackish red-brown; they are furnished with coarse hairs and bristles only; the femora of the first two pairs are strongly granulose, of the other two pairs slightly so, and there is a deep black-brown annulus at the fore extremity of the tibiæ. The bristles beneath the tarsi of the fourth pair are of a somewhat calamistrum nature.

*Falces* moderately long, powerful, rounded, and rather prominent in front, similar in colour to the cephalothorax.

*Maxillæ* short, very strong, inclined towards the labium, of a deep brown colour.

*Labium* more than double as broad as it is high, the sides converging to the apex, which is very broadly truncated.

*Sternum* large, heart-shaped, with its posterior extremity slightly drawn out into a blunt point. Surface tolerably convex and strongly granulose; colour, like that of the labium, deep black-brown.

*Abdomen* large, of regular oval form, and convex above, black in colour, clothed above with coarse, dark, rusty-reddish hairs. A slender marginal yellow-white line runs round the fore half, and is dentated at its ends. A similar, broken line runs longitudinally through the middle, and is crossed at the highest part of the upperside by another broken curved line of the same colour; low down on each side, near the fore-end, is a short, somewhat curved, narrow yellowish bar. This pattern probably varies much in distinctness in different specimens. The genital aperture is of a deep red-brown colour and of characteristic form. Spinners short, compact, and of a deep reddish-brown colour.

*Hab.* GUATEMALA (*Champion*).

## LIGER*, gen. nov. (fam. Theridiidæ).

*Cephalothorax* much longer than broad, oval; lateral marginal impressions at the caput scarcely perceptible and normal lateral indentation slight; thoracic indentation very large, circular, dish-like. Upper convexity moderate. Caput scarcely higher than the thorax. Ocular area sloping forwards. Clypeus transversely impressed at the middle, and prominent at the lower margin; its height greatly exceeds half that of the facial space.

*Eyes* rather small, subequal, widely placed, across the whole width of the caput; the fore-centrals form a large quadrangle a little broader than long. The lateral pairs are largest, and each is seated on a strong tubercle. The posterior row is straight or very nearly so. The fore-central pair are on a slight prominence.

*Legs* slender, not very long, 1, 2, 4, 3, furnished with hairs, many of which are long and bristle-like, and with a long bristle from each of the genuæ.

*Falces* tolerably strong, straight.

*Maxillæ* moderately long, strong, broad, inclined to the *labium*, which is broader than high, and well rounded at the apex, though not of a semicircular form.

*Sternum* subtriangular, somewhat heart-shaped, longer than broad, and broadly truncated at the posterior extremity, the coxæ of the fourth pair of legs being separated by an interval equal to their own length.

*Abdomen* short, globular, joined to the thorax by a short but distinct pedicle, which is somewhat covered by the projecting edge of the hinder part of the thorax.

### **Liger incomta,** sp. n.

*Adult male*, length 1 line.

*Cephalothorax* yellowish-brown, with a slender black longitudinal line from the thoracic indentation backwards. Normal grooves indicated by converging darker lines.

*Legs* and *palpi* pale yellow; the coxal joints have their undersides prominent in a longitudinal ridge-like form. *Falces*, *maxillæ*, *labium*, and *sternum* slightly tinged with yellow-brown. The falces have a strong, abrupt prominence at their base in front, but this is probably only a sexual character.

*Palpi* short; cubital joint short, bent, claviform; radial joint longer and stronger than the cubital, its fore extremity spreading over the base of the digital joint and closely fitting (its point of contact is not easy to see at first sight); digital joint rather large, oval; the palpal organs compact, and, among other corneous processes, a strongish curved tapering spine springs from a large process at the fore end, and curving backwards crosses over about the middle of the palpal organs to their inner side.

*Sternum* strongly convex and with somewhat ridge-like but not strong prominences opposite to the insertion of the legs.

*Abdomen* yellowish, thinly clothed with hairs. Spinners short, compact.

*Hab.* GUATEMALA, between Petet and Chicoyoito (*Sarg*).

## ACHÆA, Cambridge.

### **Achæa crocea,** sp. n.

*Adult male*, length rather less than 1 line.

This spider resembles some species of the genus *Laseola*, Simon, more nearly than the typical species of *Achæa*, *A. insignis*, Cambr., owing to the rather more produced and prominent fore extremity of the caput and higher clypeus.

*Cephalothorax* dull orange-yellow, with a few long, erect, slender, bristly hairs on the upperside. The clypeus is strongly impressed across the middle, and prominent at the lower margin; its height greatly exceeds half that of the facial space.

*Eyes* normal; looked at from above and slightly behind, the posterior row is straight or very nearly so. The

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* Nom. propr.

anterior row is greatly curved, the convexity of the curve directed forwards. Each of the large fore-central eyes is contiguous to the fore-lateral on its side; the fore-centrals are a diameter or slightly more apart; those of the posterior row are separated by nearly equal intervals of less than a diameter; that between the central pair is perhaps rather less than the others.

*Legs* subequal in length, 1, 4, 2, 3, not very long, moderately strong, like the cephalothorax in colour or a little paler, furnished with hairs only, some of those on the femora long and of a rather bristly nature.

*Palpi* short, similar to the legs in colour. Cubital joint short, strong, very rounded or nodiform in front. Radial joint short, broad, spreading, of a somewhat umbrella-shape, covering the base of the digital joint (so as to make the demarcation between the two rather difficult to see). Digital joint very large, of an oblong-oval form, clothed like the radial joint with coarse hairs, and also of a yellow-brown colour. Palpal organs well developed, not very complex, but consisting of some characteristic corneous lobes and processes.

*Falces* short, rather weak.

*Maxillæ* moderately long, very strong, especially at the base, greatly inclined to the labium, over which they nearly meet at the extremities.

*Labium* rather small, broader than high, the apex somewhat obtusely pointed.

*Sternum* large, heart-shaped, nearly as broad as long, considerably convex, and its posterior extremity very obtusely pointed. These parts—falces, maxillæ, labium, and sternum—are similar to the legs in colour.

*Abdomen* short-oval, ordinarily convex above, of a dull brownish-yellow colour, thinly clothed with rather coarse hairs.

*Hab.* GUATEMALA, Cubilguitz (*Sarg*).

## FILISTATA, Latreille.

### **Filistata insignis,** sp. n.

*Adult male*, length 1⅓ line; *adult female*, length 2 lines.

This spider is of ordinary general form and structure.

*Cephalothorax* of the female oval, broader behind than in front, where it is slightly drawn out in the centre into a short point. Orange-yellow in colour, margined with a black line, and with a broad somewhat diffused blackish longitudinal central band from the hind margin to the ocular area, whence it continues to the fore margin in a narrower blackish band from each lateral pair of eyes.

*Eyes* closely grouped in two transverse, nearly equally curved rows, the curves not very strong, and their convexity directed backwards. They form a transverse oblong area nearly double as broad as long, and are placed on and about a strong tubercular eminence, the height of the clypeus being two-thirds that of the facial space. The fore-laterals are largest, and the hind-centrals smallest. The intervals between the eyes of the anterior row are very small but equal, these eyes being almost contiguous; each hind-central eye is contiguous to the hind-lateral on its side, and the two hind-laterals are separated by two diameters' interval or a little less, those of each lateral pair are contiguous to each other.

*Legs* moderately long, rather strong, 1, 4, 2, 3. Colour like that of the cephalothorax, rather faintly and irregularly banded with yellow-brown. They appeared to be furnished with hairs only, though almost all had been rubbed off; from the same cause also, no doubt, all traces of the calamistrum had disappeared.

*Palpi* long, strong, granulose, furnished with long, coarse hairs, and similar in colour to the legs.

*Falces* small, weak, straight, somewhat cylindric, furnished with coarse hairs, and similar in colour to the cephalothorax; fang short.

*Maxillæ* and *labium* of normal form, but of large size; colour like that of the palpi. The maxillæ have at their termination a dark, short, sharp spine, just in contact with the fang of the falces.

*Sternum* oval, yellow.

*Abdomen* of a short-oval form, round behind, pale dull yellow in colour; clothed with coarse hairs, and with a longitudinal, central series of six triangular, deep blackish-red-brown markings, each one connected by its apex with the base of the one before it; on each side is a corresponding series of vertical stripes of the same colour, the three or four posterior ones connected with the angles at the base of the central triangles next to them. Spinners normal and conspicuous, in front of them the mamillary organ, or

supernumerary spinners, divided in two and placed transversely. The genital aperture is simple, consisting only of a narrow transverse linear opening.

The *male* resembles the female nearly in colours and markings; the central longitudinal band on the cephalothorax is much constricted in the middle; and the triangles on the abdomen are all connected with the lateral stripes; the tibiæ, metatarsi, and tarsi of the legs of the first pair were missing, though, judging from the length of the femora, these legs are much the longest. The annulations on the legs were fainter than those of the female.

The *palpi* are long; the radial joint is nearly three times the length of the cubital, increasing gradually in strength to the fore extremity, very slightly curved, and clothed with long coarse hairs towards the tip. The digital joint is exceedingly small, of a cup or socket form, into which the base of the palpal organs fits; these consist of a simple rounded bulb, drawn out gradually into a long, tapering, curved, sharp-pointed process.

The *maxillæ* have a spine at their extremities as in the female, but rather stronger.

*Hab.* GUATEMALA, Valley of the Motagua and San Antonio (*Sarg*).

In the different proportion of the ocular area and different curvature of the posterior row of eyes, from that laid down by M. Simon as the generic type ('Histore naturelle des Araignées,' pp. 254 & 258), this species is strongly aberrant, but there seems to be nothing at present to justify its exclusion from the genus *Filistata*.

## AGRIOGNATHA, gen. nov. (Epeiridæ).

(*Tetragnatha*, Cambridge, ad partem, anteà, p. 144.)

*Cephalothorax* longer than broad, moderately convex above; caput and thorax about level, lateral marginal impressions at the caput moderate; normal indentations between the caput and thorax strong, as also is that at the thoracic junction; anterior margin angular.

*Eyes* subequal, occupying the whole width of the fore part of the caput, and in three well-separated groups; the central quadrangle is rather longer than broad, and slightly narrower behind than in front. The fore-central pair are seated on a slight prominence, as is also each of the lateral pairs; the hind-centrals are in a straight line with the lateral pairs, so that a transverse line passing through the former would just go between the laterals, which are contiguous to each other on either side. The posterior row is slightly curved, the convexity of the curve directed forwards; the anterior row strongly curved, with a similar direction of the curve. The interval between the hind-centrals is equal to an eye's diameter, being half that which separates each from the hind-lateral eye on its side.

*Legs* very unequal in length, 1, 2, 4, 3; moderately strong; spines on all, excepting on the tarsal joints, tolerably numerous and moderately strong.

*Falces* long and strong, divergent and projecting.

*Maxillæ* rather long, divergent, much the broadest at the extremity, the corners of which are angular.

*Labium* as broad at the base as high, rather decreasing in width to the apex, which is rounded; the height of the labium is a little less than half the length of the maxillæ.

*Sternum* short, heart-shaped, not much longer than broad.

*Abdomen* somewhat cylindrical; spinners very short, compact, of equal length.

This genus is nearly allied both to *Pachygnatha*, Sund., and *Tetragnatha*, Latr., and appears exactly to connect the former (which has strong affinities with the Theridiidæ) with the latter, which is equally connected with the Epeiridæ. The eyes are like those of *Pachygnatha*, while the maxillæ are very similar, though much shorter, to those of *Tetragnatha*. The sternum is, however, very dissimilar to that of the latter. The difficulty of including it within either of these generic limitations was felt in the

description of *Tetragnatha pachygnathoides* (p. 144, *suprà*). Having now come across a rather more marked species, I have formulated the present genus for the reception of both.

### Agriognatha bella, sp. n.

*Adult male*, length a little over 2 lines.

*Cephalothorax* dull orange-yellow, the caput on the upper part, and the ocular area, suffused with yellow-brown; the height of the clypeus about equals the diameter of one of the fore-central eyes.

*Legs* similar in colour to the cephalothorax. The femora, tibiæ, and metatarsi of the first and second pairs are curved, and their tibiæ and femora are tinged with yellow-brown at the extremities. Among the spines on the legs may be noted four in a longitudinal straight line at the base, in front, of the femora of the first pair.

*Falces* strong, very divergent, and projecting; the outer marginal line (looked at from above and behind) is curved; they are prominent at the middle of the inner margin, and strongly protuberant about the middle in front. A few strong teeth in two rows on the inner margin: one, the strongest, is on the inner side at the extremity close to the articulation of the fang, and has its short curved slightly bifid point directed outwards; along the convex side of the curve of this tooth are several bristles in a longitudinal line. Fang strong, as long as the rest of the falx; generally curved, but more abruptly so near the point; outer margin impressed at the middle, corresponding with which, on the inner edge, is a strongish angular prominence.

*Palpi* short, rather slender; radial and cubital joints short, of equal length, the former strongest, and with several long black bristles at its extremity and outer side; digital joint long and narrow. Palpal organs very large, consisting of a large, glossy, corneous, nearly circular pale yellow lobe beneath the hinder part of the joint; behind this and immediately in front of the radial joint is a rather long, straight, stalk-like, slightly tapering corneous process with a knob at the end, on which are disposed a few fine bristles; at the extremity of the circular lobe are several corneous processes, one of which, a tapering sharp-pointed spine, has its point near or in contact with the end of the digital joint.

*Maxillæ* and *labium* yellowish, tinged with dusky yellow-brown.

*Sternum* yellow.

*Abdomen* oblong-oval, or somewhat cylindrical, of a dull greyish-luteous colour, marked along each side with a broadish band of small separate silvery spots of different sizes, leaving a central longitudinal dentated band clear of spots. A single line of similar spots runs along the middle of the underside.

*Hab.* Costa Rica (*Rogers*).

### Agriognatha pachygnathoides.

*Tetragnatha pachygnathoides*, Cambr. anteà, p. 144, t. 18. fig. 4.

*Hab.* Panama, Volcan de Chiriqui (*Champion*).

## SYNÆMA, Simon.

### Synæma prosper, sp. n.

*Adult male*, length 1½ line.

*Cephalothorax* broader than long, more than double the breadth across the thorax of the anterior or lower margin of the clypeus; looked at from above the lateral margins of the thorax are circularly curved. Caput short, lateral marginal indentations at the caput moderate. Colour dull orange-yellow tinged with brown; the ocular area, upper part of the clypeus, and two broad longitudinal bands running backwards from each end of the ocular area to near the posterior extremity deep blackish-red-brown, leaving a still broader central longitudinal orange-yellow band between the lateral bands. The normal spines on the cephalothorax are long and strong; the margins of the thorax are also furnished with short black spines. The height of the clypeus is less than half that of the facial space.

*Eyes* in normal position. The two lateral pairs are each seated on a strong geminated greyish tubercle, *i. e.* each eye on a subconical tubercle, the two tubercles running one into the other. The central quadrangle is broader than long, the length of the anterior side being a very little greater than the length of the quadrangle. The eyes of each row respectively are equally separated; the fore-laterals are largest, and the hind-centrals, apparently, the smallest.

*Legs* very unequal in length, 1, 2, 4, 3; those of the 1st and 2nd pairs very long, at least three times or more the length of the spider. Spines tolerably strong, at least those on the femora; those on the tibiæ and metatarsi are long but fine. The colour of the legs is like that of the cephalothorax, perhaps a little clearer and paler. The first and second pairs have a small annulus at the anterior extremity of the femora and genuæ, and the posterior extremity of the tibiæ, together with a broad annulus at the anterior extremity of the tibiæ, the fore half also of the metatarsi and tarsi, dark brightish red-brown. The third and fourth pairs are very short and unicolorous.

*Palpi* short, yellow, furnished with spines and bristles. Cubital joint short, strong. Radial joint shorter, with its fore extremity on the outer side produced into a long somewhat tapering apophysis, as long as or longer than the joint, and having two prominences on its outer side, and ending with a small curved spine-like point or claw; this apophysis is very near to the digital joint, which is oval and of tolerable size. Palpal organs simple, consisting of a large, circular, very convex lobe, from the inner fore extremity of which issues a slender, nearly circularly-curved, black spine, whose filiform point is beneath the fore end near the outer side of the digital joint.

*Falces* moderately long, strong, subconical, similar in colour to the cephalothorax.

*Maxillæ*, *labium*, and *sternum* normal, and similar to the legs in colour.

The *abdomen* is exactly oval in shape, rather flattened above, of a dull pale orange-yellow tinged with brown, with a short longitudinal central deep blackish-red-brown bar on the fore half of the upperside, and a thin lateral marginal line or border of the same colour. The hinder half of the upperside has two longitudinal converging rows of deep blackish-red-brown spots or blotches, being, no doubt, the remnants of the normal angular bars or chevrons. The upperside of the abdomen is thinly covered with strong, erect, black, spine-like bristles.

*Hab.* GUATEMALA, Cubilguitz (*Sarg*).

This spider is nearly allied to, but quite distinct from, *S. cirripes*, Cambr. (anteà, p. 79, t. 10. fig. 11).

## LIOCRANUM, L. Koch.

### **Liocranum mirabile,** sp. n.

*Adult male*, length 2 lines; *adult female*, length $2\frac{1}{4}$ lines.

*Cephalothorax* broadish-oval, broadly truncated in front; lateral marginal constriction at the caput gradual and slight; upper convexity moderate; the profile forming an even slightly curved line, with a small notch at the thoracic junction. Colour yellow-brown, clearer yellow at the occiput, the sides and converging lines dusky blackish. Clypeus very low, height not half the diameter of a fore-central eye.

*Eyes* of moderate size, subequal; anterior row nearly straight; of the posterior row, which is much the longest and curved, the convexity of the curve is directed backwards. The central quadrangle is broader than long, the anterior side shortest. The interval between the hind-central pair is distinctly but not considerably greater than that between each and the hind-lateral eye next to it. The interval between the fore-centrals is about half a diameter, that between each of these and the fore-lateral next to it is very small, much less than between the fore-centrals.

*Legs* moderate in length and strength, 4, 2, 1, 3; spines normal; colour brownish-yellow, the greater part of the femora and tibiæ suffused with dusky blackish.

*Falces* moderate in length and strength, slightly diverging at their extremities; colour dusky yellow-brown.

*Palpi* moderate in length. The humeral joint has three short spines in a transverse row at the fore extremity on the upperside and a single one behind them; cubital joint short, rather bent; radial joint longer and stronger, somewhat tumid on the upperside, where it is furnished, especially towards the fore extremity,

with numerous bristly hairs, and has a short, sharp, curved, corneous, spine-like apophysis at its fore extremity on the outer side. The digital joint is somewhat oblong and rounded at the anterior extremity, where it is furnished with a patch of short fine hairs. The palpal organs present one of the most remarkable developments I have almost ever seen: they are prominent beneath the fore end, their whole outer side being covered with a kind of corneous plate, which is continued backwards and underneath the radial and cubital joints; the margin of this plate or process is encircled with a closely-fitting, filiform, red-brown spine, which issues from a rounded lobe at the extremity on the inner side of the palpal organs. Nothing, however, but figures will give a correct idea of this unusual structural feature of these parts.

*Maxillæ* strong, straight, broadest at the extremities, where they are rounded on the outer side.

*Labium* longer than broad, half the length of the maxillæ, and slightly emarginate at the apex. The colour of the maxillæ and labium is dusky yellow-brown.

*Sternum* oval, pointed behind, slightly emarginate across its whole width in front. Colour yellow.

*Abdomen* of a flattish elongate-oval form, truncate in front; ground-colour dull luteous-yellowish, with a central longitudinal stripe, and a lateral one on each side of the fore half above, of a blackish hue; the lateral stripes are broadest and most distinct; the central one is followed, to the spinners, by five or six slightly angular, transverse, blackish bars or chevrons; the sides, also, are marked on the posterior half with three slightly oblique blackish bars. The underside has no markings. The spinners are of moderate length; those of the inferior pair are a little shorter but stronger than the superior pair, and all four are somewhat suffused with blackish towards their extremities. The anal process is of considerable length and pointed.

The *female* is paler coloured and of a brighter yellow hue, and the markings are less distinct than in the male; the genital aperture is large, and of distinctive form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## CRAGUS*, gen. nov. (fam. Drassidæ).

Nearly allied to *Clubiona*, Latr. The central quadrangle of the eyes, however, differs, being as long as it is broad, and the whole ocular area is longer (from back to front) in proportion to its width. The *maxillæ* are much straighter along their outer margin than in *Clubiona*, and well rounded at their outer extremity; the labium also is strongly notched or emarginate at the apex. *Cephalothorax* oval, longer than broad, lateral marginal constrictions moderate, truncate in front; profile even and slightly curved. *Sternum* elongate-oval, long, slender. *Legs* 1, 4, 2, 3; those of the first pair (at least in the male) of great length; spines long, slender. *Eyes* small, subequal; anterior row straight; posterior row curved, the convexity of the curve directed backwards; fore-central pair smallest; fore-laterals largest; height of the clypeus about equal to the diameter of a fore-lateral eye.

### **Cragus pallidus,** sp. n.

*Adult male*, length 2 lines.

*Cephalothorax* yellow, thinly clothed with pale hairs.

*Eyes* of the hind-central pair rather further apart than each is from the hind-lateral eye on its side; those of the anterior row near together, but the fore-central pair rather further apart than from the fore-laterals, all are on black slightly tuberculate spots. The anterior side of the central quadrangle is much shorter than the posterior side.

*Legs* rather paler yellow than the cephalothorax. The tarsi end with two, apparently, untoothed or very finely toothed claws, beneath which is a thin claw-tuft.

*Palpi* moderately long. The humeral joint has two or three spines in an obliquely transverse direction rather on the inner side towards the fore extremity, and another, single one, a little way behind near the middle of the upperside. The cubital joint is very short and has some long strong pale bristles on the upperside, one at the centre of the fore margin is strongest and of great length. The radial joint is more than double the length of the cubital, curved, strongly excavate along the outer side throughout the

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* Nom. propr.

greater part of its length, furnished on the convex or inner side with long pale bristly hairs; from its base on the outer side issues a bent or curved apophysis nearly as long and strong as the joint and with the same direction; this apophysis is convex outside, concave inside, and strongly emarginate or bifid at its extremity, which is a little broader than the base. The digital joint is large, as long as the radial and cubital joints together, oval, much drawn out at its fore extremity, like that of the genus *Tegenaria*. The palpal organs are prominent and highly developed, situated mostly beneath the basal half of the digital joint, and consisting of strong corneous processes, one of which extends to the extremity.

*Falces* of the same colour as the cephalothorax, long, moderately strong, straight, slightly porrected, a little cut away towards their anterior extremity on the inner side; teeth on the inner margins, if any, very minute; a number of coarse bristly bent hairs at their fore extremity on the inner side, spreading over the fangs.

*Maxillæ*, *labium*, and *sternum* yellow.

*Abdomen* elongate-oval, of a uniform pale luteous-yellow colour. Spinners moderate in length, porrected, the inferior pair strongest, the superior rather longer.

*Hab.* GUATEMALA, Santa Ana (*Sarg*).

## ARISTON*, gen. nov. (fam. Uloboridæ).

This genus is nearly allied to *Uloborus*, Latr., but differs from it in the much wider ocular area, as well as in other respects.

*Cephalothorax* short, broad, truncated behind, very obtuse in front; lateral marginal impressions at the caput slight; profile level from the eyes to the hinder slope.

*Eyes* subequal, of moderate size, the fore-centrals, perhaps, the largest, in two transverse nearly parallel curved rows; the convexity of the curves directed forwards; the posterior row rather the shortest and most curved. The width of the ocular area is nearly or quite double its length; the central quadrangle is broader than long, and its anterior side distinctly shorter than the posterior. The interval between the hind-centrals is nearly four times that between each and the hind-lateral eye next to it; this last interval is about an eye's diameter; that between the fore-centrals is about two diameters. The anterior row occupies the whole width of the caput. The height of the clypeus is nearly or quite equal to the diameter of the fore-central eyes.

*Legs* short, 1, 4, 2, 3, slender, destitute of spines; throughout the length of the upperside of the femora of the 2nd, 3rd, and 4th pairs is a single line of rather close-set, long, prominent, curved, slender hairs, each issuing from a minute tubercular base or granulation. This, however, may be only a specific character.

*Palpi* short, ending with a weak, untoothed, curved claw.

*Falces* short, strong, straight, subconical, prominent or tumid in front.

*Maxillæ* short, strong, broad, truncate.

*Labium* small, somewhat wider across the middle than at the base, and pointed at the apex.

*Sternum* rather elongate-oval, hollowed out strongly at the anterior margin to admit the labium, very convex.

*Abdomen* short-oval, strongly convex above; spinners short at the apex of the abdomen, inferior pair strongest; infra-mammillary organ undivided, and close in front of it is a long transverse opening (probably spiracular). The calamistrum on the metatarsi of the fourth pair of legs extends only along half the joint.

### **Ariston albicans**, sp. n.

*Adult female*, length 1 line.

*Cephalothorax* pale yellow, with a broad, diffused, dusky blackish, longitudinal band on each side from the hind-lateral eyes to the posterior extremity.

*Eyes* on black, slightly tuberculate spots (for relative size and position, &c., see generic characters above).

*Legs* dull greenish-yellow, suffused on the tibiæ, metatarsi, and tarsi with a dusky hue; on the genuæ, and also at the base, and near the fore extremity on the upperside of each of the tibiæ is a long, tapering, somewhat spine-like bristle.

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* Nom. propr.

*Maxillæ*, *labium*, and *sternum* similar to the legs in colour.

*Abdomen* white above; a slender cruciform line on the fore part of the upperside, two blotches in a transverse line towards the hinder part, the sides, underside, and a ring or patch just above the spinners enclosing a white spot, being of a pale dull greyish-black hue. The genital aperture and process are rather large and of very characteristic form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## META, C. L. Koch.

### **Meta superans,** sp. n.

*Adult male*, length very nearly 2 lines.

This spider is nearly allied to *Meta flava*, Cambr. (anteà, p. 135, t. 18. fig. 8), which it resembles closely in general colour and markings; it is, however, smaller, and differs distinctly in the structure of the palpi, as well as in some other points.

The *cephalothorax* is dull orange; nearly the whole of the upper part of the caput is occupied by a somewhat tapering dark yellow-brown longitudinal band, which is continued through the thoracic junction to the hinder extremity; this band is divided longitudinally as far as the thoracic junction by a fine line of the same colour as the cephalothorax generally; the sides of the thorax are marked by converging dusky yellow-brown lines; the thorax is strongly gibbous on each side of the thoracic junction, thus intensifying the depth of the normal indentation.

The *eyes* are subequal, in the normal general position, and seated on black tubercles; those of the fore-central pair are the largest. The curve of the posterior row is slight, and its convexity is directed forwards; that of the anterior row is strong, its convexity having the same direction. The four central eyes form a quadrangle slightly longer than broad, and its fore side slightly, but distinctly, longer than the hinder one. The interval between the hind-central pair is small, being just half that between each and the hind-lateral eye next to it. The fore-central pair are divided by about half a diameter's interval. The height of the clypeus barely exceeds half the diameter of one of the fore-central eyes.

*Legs* moderate in length and strength, 1, 2, 4, 3. Colour yellow, immaculate, except a very slight tinge of yellow-brown at the fore extremity of the first and second pairs. Spines normal.

*Palpi* short; radial and cubital joints very short, the latter with a long, strong, tapering bristle near its fore extremity on the upperside; the radial is stronger than the cubital joint, and besides other hairs and bristles has two long strong bristles near its extremity rather on the inner side, one of these being stronger and longer, the other less so than on the cubital joint; digital joint large, of irregular form, with a large kind of duplex lobe near its base directed inwards; the palpal organs are highly developed and complex; at their base, close above the fore extremity of the radial joint, is a large irregular corneous process, corresponding to one in a similar position in *Meta flava*, but of quite a different form; this process has three or four strong prominences, one of which is smaller than the rest, but distinctly bifid at its extremity, no such a one exists in *M. flava*; at the fore extremity of the palpal organs is a strong, circularly curved, black, closely adherent spine, and within its coil are some other corneous processes.

*Falces* long, not very strong, nearly straight, the extremities slightly divergent; colour yellowish-brown.

*Maxillæ* and *labium* rather paler than the falces.

*Sternum* yellow.

*Abdomen* oval, of a dull leaden hue, marked with small dull silvery-white spots, some disposed in two longitudinal central converging lines indicating the position of the dorsal vessel, the rest along the sides and margins of the upperside. The colours, however, and markings of the abdomen had evidently suffered from preservation in spirit, and can hardly be relied upon, from their present appearance, in the only example as yet seen.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

ARGYROEPEIRA, Emerton.

## Argyroepeira debilis.

*Argyroepeira debilis*, Cambr. anteà, p. 5, t. 1. fig. 9.

This species was described from two damaged specimens of the female only from Panama: examples of both sexes, since received, from Mexico, confirm the validity of the species and the general correctness of its description. As regards the female, it may be added here that the legs of the first pair are of great length, greatly exceeding that of the rest; the colour of the tibiæ, metatarsi, and tarsi of this pair is darkish yellow-brown; the extremities of its femora and tibiæ are strongly suffused with reddish-brown, though scarcely amounting to definite annulation.

The length of the male is $1\frac{1}{4}$ line: in its general colours and markings it resembles the female; its anterior legs, however, are still longer in proportion to the rest, and they are all more unicolorous, though showing some traces of brown at the extremities of the femora and tibiæ of the first pair. The palpi are short, the cubital and radial joints very short and of equal length; from the upperside of each issues, among others, a long slender bristle, that on the cubital joint shortest but strongest; digital joint oval, equal in length to the cubital and radial joints together. Palpal organs simple, consisting of a large, toothed, oval, prominent pale lobe as long as the joint, and its anterior extremity ending with a short double or somewhat bifid process, and issuing from the point of the longer of these processes is a very minute black filiform spine. On the sides of the abdomen in this sex the silvery spots are less numerous, but individually larger, and towards the lower part of each side, nearer to the spinners than to the fore extremity, is a clear oblique space or short band without any spots. The abdomen itself is also less elevated, that of the female being nearly globular, while that of the male, though very convex above, does not nearly approach the convexity of that of the female.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

Though this spider is an undoubted Epeirid, Mr. Smith's note leaves it doubtful whether *A. debilis* spins a geometric snare or not. He says:—"There were irregular threads at the ends of the bushes, over a highland stream, on which these spiders were found; in two cases single lines stretched to bushes on the other side of the stream, but I could discover no other web."

LABDACUS, Cambridge.

## Labdacus prolatus, sp. n.

*Adult male*, length 5 lines.

*Cephalothorax* of normal form, short-oval, but to the lateral marginal indentations of the caput rather longer than broad; truncate both at the anterior and posterior extremities, flattened above, the profile line a little depressed at the thoracic indentation, which is strong and broad. Colour pale yellow-brown, margined with black and with some fine scratchy red-brown markings on the surface; the fore part of the ocular area is suffused with dark yellow-brown. Height of the clypeus equal to the diameter of one of the fore-central eyes.

*Eyes* of unequal size and in normal position. The four central ones form a quadrangle longer than broad and its anterior side much the shortest; on each side the lateral pairs are seated on the outer side of a strong black tubercular prominence, and rather behind the straight transverse line of the hind-centrals, the hind-lateral eyes being largest of the eight and the fore-laterals the smallest. The fore-central pair are seated on the rather prominent fore extremity of the caput and are separated by an eye's diameter; the interval between the hind-centrals, which are seated on black tubercles, is rather distinctly more than a diameter,

and each is at least three diameters from the hind-lateral eye on its side. The transverse line of the hind-central and fore-lateral eyes is straight, that of the hind-centrals and hind-laterals considerably curved, the convexity of the curve directed forwards; the interval between the eyes of each lateral pair is nearly equal to the diameter of the posterior eye.

*Legs* long, tolerably strong, 1, 2, 4, 3; yellow in colour, armed with numerous long strong spines, mostly in a series of pairs beneath the tibiæ and metatarsi. Terminal tarsal claws 3.

*Palpi* short, similar to the legs in colour; cubital and radial joints very short, with much the appearance of being forced one over the other; the radial joint has a short, broad, somewhat quadrate, apophysis, with a prominent point at its hinder corner on the outer side, and another larger one of a similar kind underneath, and on its inner side some strong tapering spines; the digital joint is long, narrow, drawn out into a gradually tapering point, armed with a slightly curved terminal claw and with numerous long strong tapering spines; the length of the digital joint is equal to that of the humeral joint; the palpal organs are tolerably compact, complex, and placed beneath the basal half of the digital joint.

The *maxillæ* and *labium* are normal, yellow, tinged with yellow-brown.

*Falces* powerful, straight, a little porrected; profile curved; colour yellow, with an oblique brown stripe and a black line in front and a shorter brown stripe on the outer side at the base.

The *sternum* is almost diamond-shaped, the anterior extremity being, however, truncated, the posterior having a sharp point between the inner corners of the coxæ of the fourth pair of legs, which are here as nearly as possible in contact. Colour of sternum yellow.

*Abdomen* long, narrow, somewhat flattened, of a dull yellowish hue, mixed with brown and blackish. It was too much shrunken to admit of seeing the whole pattern, but there appeared to be on the upperside a long, narrow, central, tapering, pale marking, edged with blackish, extending about halfway to the spinners; these are prominent, moderately long, the inferior pair longest and strongest; the anal tubercle is large and composed of two strong basal and terminal (subconical) joints.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## PEDO *, gen. nov. (fam. ? Drassidæ).

*Cephalothorax* oval, much longer than broad, lateral marginal indentations at the caput tolerably strong; sides of caput nearly parallel, moderately convex above; profile slightly curved, nearly level.

*Eyes* subequal, in two transverse rows of nearly equal length, rather wide apart, slightly curved, the convexity of the curve of the anterior row, looked at from above and behind, directed forwards, that of the posterior row backwards. The four centrals form a quadrangle whose length is a little greater than its breadth, and its fore side a little shorter than the hinder one. The fore-lateral eyes are a little the largest. The height of the clypeus is nearly equal to half that of the facial space.

*Legs* not very long, moderately strong, 4, 1, 2, 3 or 4, 1, 3, 2, but little difference between 1, 2, and 3,—2 and 3 in fact almost if not quite equal,—furnished with slender, and not very long, spines, chiefly in a series of pairs beneath the metatarsi and tibiæ—3 pairs beneath the former, 2 beneath the latter; a thin scopula beneath the tarsi and perhaps a small portion of the metatarsi; tarsal claws 2, with a compact claw-tuft beneath, and underneath the tuft is a compact group of short dark (nearly black) spines at the extremity of a kind of corneous spur or claw-joint.

*Falces* strong, conical, somewhat tumid, and prominent in front.

*Palpi* moderately long; digital joint long, somewhat clavate, and with a terminal curved dentate claw.

*Maxillæ* short, rather broad, slightly divergent, straight, profile of the inner margin curved, rather obliquely truncated at their extremity on the outer side; the inner corner furnished with a strong tuft of hairs.

*Labium* short, about half the length of the maxillæ, broader than long, rounded at the apex.

*Sternum* heart-shaped, longer than broad.

*Abdomen* cylindric-oval; connecting-pedicle covered with a semi coriaceous plate continuous with and including that surrounding the genital aperture and the spiracular organs. These last are four, two in the normal position and one near (on each side) in front of and a little outside of the other. Spinners short, strong compact, the inferior pair very slightly the longest.

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* Nom. propr.

### **Pedo ornatus**, sp. n.

*Adult female*, length slightly over $3\frac{1}{2}$ lines.

*Cephalothorax* dull brownish-yellow, suffused with dusky-brown on the sides of the thorax, on which are also some darker converging lines, and covered with short whitish hairs.

*Legs* dull brownish-yellow tinged with olive; the 4th pair have the tarsi and metatarsi suffused with dusky-brown and a darker annulus near the fore extremity of the tibiæ.

*Maxillæ*, *labium*, and *sternum* yellow-brown.

*Abdomen* on the upperside with a broad central longitudinal band tapering towards the hinder extremity, which ends in a transverse semicircular kind of fish-tail form; this band has on each side at its beginning and at the middle an angular point and another at the extreme end; it is of a yellowish hue strongly tinged with scarlet, especially at the middle and hinder part, and thickly clothed with short white hairs. The rest of the upperside is black, the sides yellow tinged with red and clothed with short white hairs, the lower part of the sides black; a broad longitudinal brownish band occupies almost the whole of the underside. The plate covering the pedicle and spiracles yellow-brown; the spiracles pale dull brownish; genital aperture simple but characteristic.

*Hab.* Mexico, Amula in Guerrero (*H. H. Smith*).

This handsome spider seems to be nearly allied to *Agræca*, Sund., but the four spiracular openings (if I am right in believing these openings to be such) are quite abnormal, though it is at present not easy to determine their real value for systematic classification.

### HELVIDIUS *, gen. nov. (Drassidæ).

*Cephalothorax* (of adult female) elongate-oval, much drawn out in front; profile from the eyes to the hinder slope nearly level.

*Eyes* in two slightly curved rows (the convexity of the curves directed forwards), widely separated from each other; the anterior row rather the shortest and most curved, and its eyes the largest; the posterior row almost straight. The four centrals form a quadrangle greatly longer than broad, and its anterior side shorter than the posterior.

*Legs* not very long, subequal, 4, 1, 2, 3, rather strong, furnished with hairs and spines, the latter mostly on those of the third and fourth pairs; a rather dense scopula beneath the tarsi and metatarsi of the 1st and 2nd pairs, a thinner one beneath the tarsi of the 3rd and 4th pairs.

*Falces* normal, without teeth at their inner extremity.

*Maxillæ* moderately long and strong, bent, broad and rounded at their extremity, and very deeply and obliquely impressed transversely in the middle; articulation of the palpus rather less than halfway up from the base.

*Labium* of moderate size, oblong, much longer than broad.

*Sternum* oval, pointed at its posterior end.

*Abdomen* cylindric-oval, truncated in front, obtusely pointed behind. Spinners of tolerable length, cylindric, inferior pair rather longest and strongest.

This genus is nearly allied to *Prosthesima*, L. Koch, but differs in the greater separation of the two rows of eyes, the more drawn-out form of the cephalothorax, and the broader maxillæ, to which the palpi are articulated lower down, and also the stronger transverse impression of the maxillæ.

* Nom. propr.

## Helvidius lugubris, sp. n.

*Adult female*, length $3\frac{3}{4}$ lines.

*Cephalothorax* deep reddish-brown, the sides marked with black, and with a broadish central and a marginal longitudinal stripe on each side of a paler hue densely clothed with white hairs.

*Eyes* of the anterior row subequal, the centrals perhaps slightly the largest, and separated from each other by distinctly less than a diameter, each being contiguous to the fore-lateral eye next to it. The quadrangle of the four central eyes is at least one and a half times longer than broad at its widest point; the centrals are smallest and are separated by one and a half diameters from each other and from the laterals by distinctly less than a diameter.

*Legs* yellow-brown; the third and fourth pairs darkest.

*Palpi* similar to the legs in colour and spinose.

*Falces* dark yellow-brown tinged with red and furnished in front with long, strong, bristly hairs.

*Maxillæ* similar to the legs in colour.

*Labium* and *sternum* dark brown.

*Abdomen* thickly clothed with short hairs, jet-black above, with two longitudinal narrow but well-defined bright white stripes on the upperside; the black portion bounded laterally on each side by a similar but rather yellower stripe, terminating at each posterior extremity with an oblique stripe of the same colour and running below the spinners; sides and underside of a dull brownish hue. Spinners dark brown; genital aperture neither large nor conspicuous, but of characteristic form.

### ERVIG, Cambridge.

## Ervig propinquus, sp. n.

*Adult female*, length $3\frac{1}{2}$ lines.

This spider is very nearly allied to *E. albolineatus* (anteà, p. 151, t. 19. fig. 3), and resembles it very closely in pattern and distribution of colours. It is, however, rather larger and more robust, the colours are darker and brighter, the legs are brightish yellow and have dark reddish-brown annuli (not present in *E. albolineatus*) near the middle of the femora, tibiæ, and metatarsi, as well as those at the anterior extremities of these joints which are found in that species; the abdomen is obtuse at the upperside of the posterior extremity, but wants there the subconical prominence of *E. albolineatus*. The eyes form a wider transverse line, the interval between the central and lateral groups being considerably greater; those of the central group also appear to be more oval in shape. The maxillæ taper towards their extremities, and are strongly impressed transversely at the middle: this character was not noted (*anteà*, p. 151), but is common to both species.

*Hab.* Mexico, Atlixco in Puebla (*F. D. Godman*).

## Ervig albolineatus.

*Ervig albolineatus*, Cambr. anteà, p. 151.

The female only of this species was described. I have since come across an adult male of it among the spiders of Mr. H. H. Smith's collection.

*Adult male*, length nearly $2\frac{1}{2}$ lines.

This sex resembles the female exactly in colours and markings, but the abdomen is much less robust and convex above, being of a somewhat elongate cylindric-oval form; the upperside, however, of the posterior extremity is similarly subconically prominent. The first pair of legs are also of a darker yellow-brown hue. The palpi are short; the cubital joint is very short and has several bristly hairs at its fore extremity on the upperside; the radial joint is very much larger and of a tumid form; the digital joint is small and has its fore extremity above drawn out into a rather long, tapering, pointed form, furnished with a few long bristly hairs, and its inner side also produced into a somewhat similar but shorter and stronger apophysis; the palpal organs are simple, consisting of an oval corneous bulb whose fore extremity is produced in a slightly tapering form into a long, corneous, concave, obtusely-pointed,

scoop-shaped termination, on the inner side of which is a slender, bent, diaphanous, semi-corneous process.

*Hab.* MEXICO, Venta de Zopilote in Guerrero (*H. H. Smith*).

## HYPOGNATHA, Guérin.

(*Hypognatha*, Guér., 1839; *Calydna*, Cambr., 1874; *Mutina*, id., 1881.)

### Hypognatha nasuta, sp. n.

*Adult male*, length slightly over 1 line to rather less than 1⅓ line; *adult female* rather more than 1⅓ line.

Very similar in general form and appearance to *H.* (*Mutina*) *furcifera*, Cambr., though it has some remarkable points of difference.

*Cephalothorax* of normal general form; the lower margin of the clypeus is greatly produced in a kind of shelf or platform shape, the exterior corners still more projecting both forwards and sideways, and from the middle of the fore edge of the clypeus is a prominent, somewhat cylindric, slightly tapering, obtusely ended corneous process, bent downwards and extremely nose-like (in *H. furcifera* a still longer process, bifid at its extremity, springs from the upper part of the clypeus immediately below the central eyes). Colour of the cephalothorax, as well as of the legs, palpi, falces, maxillæ, labium, and sternum, yellow-brown.

*Eyes* on black spots, four forming very nearly a square close to the middle of the fore margin of the caput; the anterior pair largest, those of the lateral pairs are minute, contiguous, and placed immediately below the extremity of the produced corners of the clypeus.

*Falces* long, strong, slightly divergent, but nearly straight.

*Palpi* short; digital joint and palpal organs of large size and development, the latter prominent and complex.

*Maxillæ*, *labium*, and *sternum* normal. The pedicle connecting the cephalothorax and abdomen appears to be joined or articulated to the hinder extremity of the sternum. This peculiarity is described and figured in the delineation of *H. prospiciens*, Cambr. [Ann. & Mag. Nat. Hist. (4) xiv. t. 17. fig. 3 *d*]. From its presence in the three species probably it is of generic value.

*Abdomen* large, somewhat subtriangular heart-shaped, projecting greatly over the thorax. Integument coriaceous, rugulose below, of a pale yellow-brown hue, marked above in a kind of reticulate way with paler lines, mapping out the surface in a regular sort of tortoise-shell fashion; four round red-brown spots form a large square, or very nearly a square, on the middle of the upperside. In another example, of a generally darker hue, the colour of the abdomen is deep brown, nearly black, with a large cream-yellow, well-defined, somewhat quadrate patch at each anterior fore corner, and in the medial line of the hinder part are 2–3 small yellow spots in a longitudinal series.

The *female* is a little larger than the male, but resembles it in the general colour and character of the markings, though the peculiar development of the clypeus is absent; probably a series of both sexes would show that there is considerable variation both in the colours and distinctness of pattern. Genital process of characteristic form, but not long nor conspicuous.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith has the following note on this spider:—"Found in open wet ground near a highland stream, in a rather coarse slanting geometrical web, five or six inches in diameter, supported by lines 5 feet long to trees 10 feet apart, and about 8 feet above the ground, the spider in the centre."

## SPERMOPHORA, Hentz.

### Spermophora placens, sp. n.

*Adult female*, length rather less than 1 line.

*Cephalothorax* almost circular, not very convex above, as broad as long; clypeus extensive, much produced at

its lower margin in a nearly semicircular form (looked at from above and behind). Colour brownish-yellow, with converging rays of a darker (yellow-brownish) hue. Thoracic indentation long and deep.

*Eyes* in two groups of three, each on a triangular black tubercle, forming a posterior slightly curved row of four, the convexity of its curve directed backwards, and the other two eyes (rather the largest) forming a transverse line immediately in front of the hind-lateral eyes, contiguous with them but not quite contiguous with the hind-centrals. The interval between those of the anterior row is no more, perhaps slightly less, than a diameter, that between the hind-centrals (the smallest of the six) is nearly about one and a half diameters.

*Legs* moderately long, 1, 4, 2, 3, slender, similar in colour to the cephalothorax, furnished with hairs only; the undersides of the coxal joints are strongly protuberant.

*Palpi* short, slender, similar to the legs in colour.

*Falces* strong, conical, and of a yellow-brownish hue.

*Abdomen* nearly globular above; looked at in profile it is of a balloon shape, the spinners forming the lower point of it; it is of a bluish-white colour, marked with obscure dull purplish spots on each side of the median line, leaving a clear, central, longitudinal, tapering space between them.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

This spider was accompanied by a small mass of about twelve eggs held together by silky matter (but not in any kind of egg-sac), and attached to the underside of the spider by silken lines.

## MODISIMUS, Simon.

### **Modisimus propinquus,** sp. n.

*Adult female*, length 1¼ lines; *adult male*, length 1 line.

In size, colours, general markings, and appearance this species is very similar to *Modisimus inornatus*, Cambr. (anteà, p. 149). The two anterior eyes are distinctly larger than the rest, and are separated by rather less than a diameter; the interval between the hind-central pair is one and a half diameters, while that between each and the lateral eye of the same row next to it is less than a diameter of the former. The ocular area is divided longitudinally by a yellow stripe, very distinct and well defined in the male, and the central longitudinal yellow-brown band on the cephalothorax is narrower and tapers more towards its hinder extremity. The disposition of the eyes in the male appears to be a little different from that of the female; the four centrals form an exact square; the interval between the hind-centrals is rather greater than that between each and the hind-lateral next to it, and that between the fore-centrals is distinctly more than a diameter.

The *falces* of the male have, in front of each, on the inner side of the fore extremity a curved stripe of 20–30 rather closely set, short, obtuse spines directed downwards; this stripe of spines curves round the inner corner of the extremity of the falx.

The *palpi* are not very long, but strong. The radial joint is rather long, strong, and much curved. The digital joint is short, slightly produced in a somewhat pointed form at its extremity on the inner side, and greatly produced on its outer side into a long, somewhat bent, rather flattened, and obtusely ended apophysis directed backwards (it was not easy to see the exact form of this apophysis, owing to its proximity to some of the processes of the palpal organs). The palpal organs are of enormous size, consisting of a large, globular, corneous bulb lying on the inner side beneath the radial joint, and terminating with various corneous or spiny processes directed backwards; one of these is a long, tapering, pointed spine directed inwards, with its sharp point very near the spines above mentioned on the falces: it seems not improbable that this spine may be used to produce stridulating sounds by acting against those on the falces; at any rate the relative position of these with the spine on the palpal organs suggests the possibility of these structures being so used.

The markings on the *abdomen* are very similar to those of *M. inornatus*, but the spots appear to be more distinct and separated from each other, and the genital aperture of the female is of a different form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

FLORINDA, Cambridge.

## Florinda mirifica.

*Florinda mirifica,* Cambr. anteà, pp. 164, 165.

It is remarked in the description (*l. c.*) of this spider that the falces have along their outer surface a series of impressed punctures or minute pock-marks, forming part of a stridulating-apparatus; but more recent examination under microscopic power shows this to have been incorrect: what appeared to be impressed markings are numerous minute granulations, which, under certain conditions of light and position, seemed to be impressed instead of elevated. Probably these granulations, which have among them a few larger denticulæ, have (in connection with those on the inner side of the humeral joints of the palpi) a stridulating function.

CAREPALXIS, L. Koch; Cambridge.

## Carepalxis rotunda, sp. n.

*Adult female,* length $2\frac{1}{3}$ lines.

*Cephalothorax* short; caput of large size, the occipital portion considerably and obtusely elevated, with a subconical eminence at each corner of the ridge-like top of the elevation. The height of the clypeus is rather less than half that of the facial space, or about two diameters of the fore-central eyes. The colour of the thorax is brownish-yellow, that of the caput dark reddish-brown, the top ridge and subconical eminences dull yellowish. The caput is clothed with short, coarse, whitish hairs.

*Eyes* normal; the four centrals form a quadrangle broader than long, and its anterior side considerably shorter than the posterior. Each of these four eyes is seated on a roundish tubercular prominence, the posterior prominences considerably the largest and bearing the larger of the eyes; those of each lateral pair are a long way removed from the central group, they are seated on small tubercular eminences, contiguous to each other and near the fore corners of the clypeus.

*Legs* short, 1, 2, 4, 3, moderately strong, pale yellowish, the fore part of the femora and the genuæ dull olive-yellowish-brown, the other joints indistinctly annulated with dusky yellow-brown; they are furnished chiefly with hairs, the spines few and weak.

*Palpi* yellowish, indistinctly annulated with dusky yellow-brown.

*Falces* strong, straight, subconical. Colour yellow-brown.

*Maxillæ* and *labium* normal, of a dusky brownish colour.

*Sternum* small, heart-shaped; its posterior extremity between the coxæ of the fourth pair of legs, which are here nearly touching each other. Colour dull yellowish, somewhat suffused with whitish.

*Abdomen* large, circular, projecting greatly over the thorax, looked at in profile almost hemispherical; towards the fore extremity near the margin on each side is a small subconical eminence, behind which are two others of a smaller size in a longitudinal line, scarcely visible above the general level. It is of a dull pale brownish hue, thickly covered with whitish, but presenting a fairly well-defined pattern. At the middle of the fore extremity are three short, white, parallel, longitudinal lines or stripes, the central one trifid at its posterior extremity; on the hinder part is a tapering, angulated, dark brown marking, and on each side is a well-defined longitudinal black wavy or subangulated line running from the fore end to the spinners; a broad, longitudinal, dark brown band occupies the middle of the underside, four white spots surround the spinners, and two others of larger size are in a transverse line in front of them. The genital aperture is small and inconspicuous.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## DELOZEUGMA, Cambridge.

### **Delozeugma mordicans,** sp. n.

*Adult male*, length 5 lines (length of falces 2–2½ lines).

In general form and appearance this species resembles closely *D. formidabile* (anteà, p. 106, t. 14. fig. 5), but the different form of the palpi distinguishes it at once.

*Cephalothorax* bright reddish-yellow-brown, darkest on the caput, with a broad, somewhat irregularly defined, darker longitudinal band and a narrow marginal border on each side; the surface is finely granulose and covered at least on the sides with short whitish hairs; the height of the clypeus is equal to the diameter of the fore-central eyes.

The *eyes* of the posterior row and the fore-laterals are of equal size, the fore-centrals considerably larger; the interval between the latter is rather more than half a diameter, and each is about half that distance from the fore-lateral eye next to it; the interval between the hind-central pair is rather more than that between each and the hind-lateral next to it; viewed from in front the anterior row is straight, but looked at sideways it is slightly curved, the convexity of the curve directed backwards. The convexity of the more strongly curved posterior row is distinctly directed backwards. The eyes of each lateral pair are separated by less than half a diameter.

The *legs* are of tolerable length and strength, 4, 1, 2, 3 or 4, 2, 1, 3—the difference between 1 and 2 very slight; they are of a brownish-orange-yellow colour, armed with rather slender spines, of which those beneath the tibiæ and metatarsi are arranged in a longitudinal series of pairs; those, however, on the third and fourth pairs are the least regularly placed. There is a not very dense scopula beneath the tarsi and the anterior portion of the metatarsi and a compact claw-tuft beneath the tarsal claws.

The *palpi* are moderately long, yellow, excepting the radial and digital joints. The humeral joint has three short spines on its upperside near the fore extremity, 1, 2. The cubital and radial joints are of about equal length; the latter is of a deep red-brown colour, a little protuberant at its anterior extremity in front, and has at its outer extremity a strong apophysis as long as the joint itself, broad, obtuse, and broader at the extremity than at its origin, in fact of a hollow spoon-like form, and, looked at sideways, a little directed backwards. The digital joint is large, of an elongate-oval form, and longer than the radial and cubital joints together; it is of a dark yellow-brown hue, and pretty thickly clothed with short fine hairs. The palpal organs are simple, of an oval bulbiform shape, and occupy the greater part of the concave side of the digital joint.

The *falces* are very long and strong, straight, divergent, similar in colour to the cephalothorax, and very strongly, though not horizontally, porrected; they are equal, or nearly, in length to the cephalothorax. The fangs are long, strong, slightly curved, and have a small subdentiform prominence near the base on the inner margin; they are articulated to the falces a little obliquely, though more nearly horizontally than vertically, and, when at rest, lie along their lower margin, which has, just about the middle, two strong teeth in a longitudinal line directed forwards; the front tooth is strongest, longest, and curved, and has a flattish disc-shaped, semicircular, enlargement in front of its extremity.

The *maxillæ* and *labium* are yellow-brown and the *sternum* yellow.

The *abdomen* is brownish-yellow, the sides and hinder part black-brown; two longitudinal black-brown parallel spots or short stripes are on the fore half of the upperside, followed towards the spinners by a series of several broken, oblique, blackish lines on either side, representing the ordinary angular bars or chevrons. Spinners short, compact, the inferior pair strongest; just in front of them is a small corneous-looking, angular, red-brown point—colulus ?

*Hab.* GUATEMALA, Cahabon and Tactic in Vera Paz (*Sarg*).

Mr. Sarg remarks on the example from Cahabon, that it "jumps freely"; and on that from Tactic, that the colour of the cephalothorax was dark sepia. "Legs and palpi dark Roman ochre; lobes on palpi (no doubt the apophysis above noted) black, with greyish hairs; falces enormous, dark brown; abdomen dirty yellow-ochre, markings sepia; underneath pale brown; sternum burnt sienna." The colours, therefore, as is so commonly the case, had somewhat changed in spirit of wine.

## TENEDOS *, gen. nov. (fam. Zodariidæ; subfam. Zodariinæ).

*Cephalothorax* much longer than broad, pear-shaped, the anterior part drawn out; the fore extremity narrow, hinder part oval; normal indentations very slight; lateral marginal impression at the caput slight, upper convexity moderate; profile forming an almost uniform but slight curve from the hinder end to the eyes.

*Eyes* subequal, rather closely grouped together on slight tubercles, in two nearly concentric curved rows, the convexity of the curve directed backwards, the anterior row shortest. The four central eyes form a quadrangle much longer than broad, and the fore side rather the shortest; the interval between the hind-centrals is less than half a diameter, that between the fore-centrals (which are smallest, the rest being equal) about half a diameter. Each hind-central is at least rather more than one and a half diameters from the hind-lateral eye on its side. The four lateral eyes form a large quadrilateral figure much broader than long, narrower before than behind, and enclosing the central quadrangle. The laterals are separated by a diameter, the fore- and hind-centrals by about or rather over the diameter of one of the latter. The height of the clypeus is considerably greater than half that of the facial space.

*Legs* not very long, subequal in length, 4, 1, 2, 3, moderately strong, furnished with spines, chiefly on the third and fourth pairs, and there are some on the genuæ as well as on the tibiæ and metatarsi; tarsal claws 3, springing from a claw-joint; superior pair strong and furnished with nine or ten longish teeth, inferior claw small, slightly curved.

*Falces* moderate in length and strength, straight, subconical.

*Maxillæ* moderate in length, slightly curved, greatly inclined to the labium, very broad and strong at the base, gradually tapering to the extremity, which is obtuse and rounded.

*Labium* longer than broad, a strong transverse indentation a little way from its base, looking like a basal portion where it narrows gradually to the apex, which is rounded.

*Sternum* short-oval, rather longer than broad, broadly truncated at its anterior extremity, and slightly pointed behind, its point broadening downwards and a little between the inner curves of the coxæ of the fourth pair of legs.

*Abdomen* oblong-oval. Spinners small, compact, those of the inferior pair much longest and strongest.

### **Tenedos lautus,** sp. n.

*Adult male*, length $2\frac{3}{4}$ lines.

*Cephalothorax* bright reddish-orange-yellow; a group of strong, bristly, black, prominent hairs on the clypeus below the fore-central eyes.

*Legs* yellow-brownish; femora strongly suffused with darker dusky brown. Six very fine spines beneath the metatarsi of the first and second pairs, four beneath the tibiæ of the first pair, and one or two only beneath those of the second pair.

*Palpi* short, similar in colour to the legs. Cubital and radial joints very short, the former rounded in front or nodiform; the latter has its outer extremity produced into a broad, strong, but short, truncate, dark yellow-brown apophysis, the corners of which are produced, the hinder production being strongest. Digital joint large, broadish-oval, with some black spines on its fore extremity; palpal organs prominent and complex, with spines and corneous processes.

*Falces* similar in colour to the cephalothorax, furnished in front with numerous short, curved, black, coarse hairs.

*Maxillæ*, *labium*, and *sternum* orange-yellow.

*Abdomen* whitish-cream-colour, with a distinctly marked blackish and red-brown pattern; the fore extremity and fore half of each side have a broad nearly black surrounding band, from the middle of which a broad central band tinged with red-brown and dilated at the end runs backwards to half the length of the abdomen, and is followed to the spinners by a series of transverse angular black bars or chevrons, the last two or three being broken at the angles; the posterior half of the sides is marked with several slightly oblique and somewhat angular black stripes. The underside has a central longitudinal blackish bar or narrow stripe, and the spinners are encircled with a ring of the same colour.

*Hab.* GUATEMALA, Antigua (*Stoll, ex Sarg*).

* Nom. propr.

## PHILODROMUS, Walckenaer.

### **Philodromus albicans,** sp. n.

*Adult female,* length very nearly 2 lines.

The general form and structure of this spider is normal.

*Cephalothorax* pale greyish-brown, minutely speckled all over with black spots and irregularly marbled and marked with white, of which markings the most regular are a **V**-shaped one in front of the thoracic indentation and a broken line along the middle of each side. There is a broad pale yellowish longitudinal central band from the hinder extremity to and including the pointed half of the **V**-shaped marking. The height of the clypeus is rather less than half that of the facial space.

*Eyes* normal, on slight subconical tubercles. The central quadrangle is broader than long, and its anterior side much the shortest; the hind-centrals are further apart than each is from the hind-lateral on its side.

*Legs* moderately long and strong, 2, 1, 4, 3. Spines normal; colour pale yellow, the front part or sides of all being thickly speckled with small black spots or points; scopula none; a small claw-tuft present; the hairs are white; spines dull pale dusky.

*Maxillæ* and *labium* pale yellowish, the former with an ill-defined, transverse, central band of white.

*Sternum* white, speckled with minute black points and covered with long, pale whitish, coarse hairs.

*Abdomen* truncate before, wider behind, where it is obtusely angular on each side and at the hinder extremity. It is dull yellowish in colour, marked and mottled with white, grey, and blackish; clothed with hairs and a few short black spines. The whole is minutely speckled with black points. The most noticeable of the white spots are some irregularly oblique lines on the hinder part and on the sides nearest to it; there are also a few linear white spots along the medial line. The sides and underside are white, the middle of the latter has a broad, dark grey, longitudinal band, whitish towards the fore part, and minutely speckled with black points. The genital aperture is characteristic in form, though not very conspicuous.

*Hab.* Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

## AYSHA, Keyserling.

### **Aysha simplex,** sp. n.

*Adult male,* length 4 lines; *adult female,* length 5½ lines.

In general structure and appearance this spider is exceedingly like a *Clubiona*, from which, however, several characters distinguish it readily.

*Cephalothorax*, *falces*, *legs*, *palpi*, *maxillæ*, *labium*, and *sternum* orange-yellow.

*Eyes* subequal, rather closely grouped in two transverse curved rows, the anterior row shortest and rather the most strongly curved, the convexity directed forwards, that of the posterior row backwards. The central quadrangle slightly longer than broad, its fore side shortest. The eyes of the posterior row are equally separated; the fore-centrals rather further apart than from the fore-laterals, being equal to about half a diameter; these last (fore-laterals) are the largest, and are separated from the hind-laterals by about half a diameter of the latter. The clypeus is very low, its height scarcely more than half the diameter of the fore-central eyes.

*Legs* long, 1, 4, 2, 3, rather slender, furnished pretty thickly with fine spines and long pale hairs. The tarsi end with a strongish, compact claw-tuft.

*Palpi* short, slender. Cubital joint short,not half the length of the radial, which is very slightly curved, cylindrical, furnished with a few long, slender, spine-like bristles, and has a tapering, somewhat sinuous, reddish-yellow-brown apophysis projecting nearly at right angles to the joint at its fore extremity on the outer side. This apophysis is longer than the width of the joint. Digital joint moderate in size, narrow-oval in form, and its base on the inner side somewhat produced and ending in a bluntish point. The palpal organs, placed at the hinder extremity of the underside of the joint, are prominent, not very complex, consisting of two lobes, from the anterior of which on the inner side issues a long, tapering, black spine, which bends sharply over to the outer side in a large free circular curve.

*Falces* long, strong, subcylindric, slightly divergent, projecting forwards, and with a few minute teeth beneath on their inner margin towards the fore part.

*Maxillæ* long, strong, rather divergent, and greatly dilated at the fore extremity, where they are furnished with a conspicuous tuft of divergent bristly hairs.

*Labium* rather more than half the length of the maxillæ, and longer than broad, rather deeply notched at the apex, the sides from a little way above the base (where there is a slight indentation or constriction) flange-like.

*Sternum* regular, oval, much longer than broad, pointed behind.

*Abdomen* long, narrow, tapering to the spinners, with a transverse slit or opening on the underside nearer to the fore than to the hinder extremity, and no doubt leading to a spiracular organ. It is of a pale yellow hue, clothed with fine pale silky hairs. The superior spinners are rather long and slender, the inferior much shorter and stronger.

The *female* closely resembles the male in colours and general characters, and the genital aperture is very characteristic in form.

*Hab.* PANAMA, Veraguas (*Boucard*).

This genus is closely allied to *Anyphæna*, from which it may, however, be distinguished at once by the transverse spiracular opening on the underside of the abdomen being in advance of the middle, whereas in *Anyphæna* it is at the middle.

## CHIRACANTHIUM, C. L. Koch.

### **Chiracanthium ferum,** sp. n.

*Adult male*, length very nearly 4 lines.

General form and structure normal.

*Cephalothorax* pale dull orange-yellow; height of the clypeus rather less than the diameter of one of the fore-central eyes.

*Eyes* very nearly equal in size; anterior row nearly straight, the convexity of the slight curve, if any, directed forwards; posterior row curved, but not strongly, the convexity directed backwards. Central quadrangle slightly broader than long, the fore side a little the shortest. The interval between the hind-centrals is equal to two diameters, and is slightly greater than that between each and the hind-lateral next to it, and the same relative position obtains with the eyes of the anterior row; those of each lateral pair are near together, but not contiguous.

*Legs* long, 1, 4, 2, 3, moderately strong, furnished with long hairs and spines. Colour yellow. The tarsi each with a compact claw-tuft and a scopula beneath them.

*Palpi* moderate in length and strength, similar to the legs in colour. Radial joint half as long again as the cubital, clothed above and below with long bristly hairs; rather prominent underneath at the fore end; at the fore extremity on the outer side is a rather long, strong, obtusely-pointed, tapering, slightly bent apophysis, half as long as the joint, and directed forwards, its fore half in close proximity to the base of the digital joint. This latter joint is large, thickly clothed with hairs, oval, and produced at its fore extremity; at its base on the outer side it has a prominent lobe, with a sinuous corneous margin or bordering spine, and is also produced at its base on the inner side; the outer corner of the digital joint terminates in a strong, tapering, slightly curved, sharp-pointed spine, directed backwards, close to the radial apophysis, and reaching a little way over the fore end of the radial joint. Palpal organs placed chiefly beneath the posterior half of the joint, rather prominent, compact, not very complex, with a tapering, pointed spine curving round their base from the outer to the inner side.

*Falces* long, nearly or quite three-fourths the length of the cephalothorax, projected a little forwards, tapering, straight; they are strongly cut away at their extremity on the inner side and furnished with numerous strong bristly hairs. Colour deep reddish-brown and glossy.

*Maxillæ* yellow at the base, deep brown above.

*Labium* dark brown.

*Sternum* yellow, suffused forwards with yellow-brown.

*Abdomen* oval, dull greenish-yellow. Spinners short, compact, of equal length, the inferior pair strongest.

*Hab.* MEXICO, Ciudad in Durango (*Forrer*).

### Chiracanthium debile, sp. n.

*Adult female*, length 2½ lines.

General character and structure normal.

*Cephalothorax* brownish-yellow, obscurely suffused with a deeper hue on the sides and hinder part.

*Eyes* subequal. Central quadrangle distinctly broader than long, and the fore side shortest. Eyes of posterior row equally separated, those of the hind-central pair by nearly two diameters' interval. Anterior row slightly curved, the convexity of the curve directed forwards; the posterior row equally curved in the opposite direction. Those of each lateral pair near together, but not contiguous.

*Legs* moderate in length and strength, 1, 4, 2, 3; spines few, excepting two beneath the hinder end of the metatarsi of the first pair, a few on those of the fourth pair, and several very small ones on the femora and tibiæ of the third pair (possibly some may have been rubbed off). The tarsi end with a claw-tuft, and beneath their fore extremity is a thin scopula. Colour yellow.

*Falces* strong, straight, very slightly projecting forwards, tapering; of a yellow-brown hue, deepening to dark red-brown at their extremity.

*Maxillæ* yellow-brown; *labium* dark brown.

*Sternum* yellow.

*Abdomen* oval; colour dull yellow-brown, mottled with minute whitish points; along the middle of the fore half of the upperside is a narrow, elongate, dull mouse-brown stripe, pointed behind, and there are two dusky spots on each lateral margin, forming a quadrangle whose anterior side is shortest; the immediate surface surrounding this stripe is suffused with dull golden-yellow, and between it and the spinners is a large ill-defined patch of rusty yellowish. The genital aperture is rather large and conspicuous, but of simple form and blackish-red-brown colour.

*Hab.* Panama, Veraguas (*Boucard*).

## ARGYROEPEIRA, Emerton (=*Opas*, Cambridge).

### Argyroepeira pulcherrima.

*Meta pulcherrima*, Keys. Beitr. z. Kenntn. d. Orbitelæ, in Verh. zool.-bot. Ges. Wien, 1866, p. 832.

*Argyroepeira pulcherrima*, Keys. Die Spinnen Amerikas (Epeiridæ), 4 Band, 1 Hälfte, p. 325, t. 16. figg. 239, 240.

*Opas mœrens*, Cambr. anteà, p. 185, t. 23. figg. 6, 6 *a–e*.

Recent examination and comparison of examples of *Meta pulcherrima*, Keys., named by Keyserling himself some years ago, prove it to be identical with *Opas mœrens*, Cambr. The species seems to be an exceedingly variable one, not only in respect to colours and markings, but also in respect to the spines on the legs; some of them have no trace of a spine, others have a few very slender ones, while a few specimens have them of a rather stronger nature. The entire absence of spines in the types of *Opas mœrens* and *O. lugens* induced me to separate them from *Argyroepeira*, in the type of which the spines are well marked, to form the genus *Opas*. It appears to me, however, now, on a fresh comparison of its types with types of *Argyroepeira*, Keyserling's named examples of *A. pulcherrima*, and others received from Messrs. Sarg (Guatemala) and H. H. Smith (Mexico), that the genus *Opas* cannot be sustained on that score, and must therefore be abandoned; more especially as all the varieties of *A. pulcherrima*, as well as those of *Argyroepeira* (*A. hortorum*, Hentz, and other species), have the hinder femora furnished with the very peculiar hairs noted suprà, p. 185, and figured on

Tab. XXIII. figg. 3 *c* and 6 *d*. It seems more than probable that *Argyroepeira mesomelas*, Cambr. (anteà, p. 135, t. 16. figg. 3, 3 *a–c*), from Teapa, Mexico, will also eventually prove to be an extreme black variety of *A. pulcherrima*, Keys.; I do not, however, feel sure upon this at present.

Hitherto the female only of *A. pulcherrima*, Keys., has been described. I am now able to give a description and figure of the male:—

*Adult male*, length $1\frac{1}{3}$ lines.

In colours and markings this sex is like the type of *A.* (*Opas*) *mœrens*, Cambr., anteà, p. 185. The legs are furnished with a very few fine spines. The two rows of peculiar long hairs on the femora of the fourth pair are longer and stronger than in the female.

The *palpi* are short. Radial joint equal in length to the cubital, stronger, and clavate, with several strong black bristly hairs in front. Digital joint of moderate size and somewhat oblong-oval form; it has a curved obtusely and enlarged ending prominence at its base on the outer side. The palpal organs are simple, prominent, consisting of a large short-oval (nearly globular) corneous lobe, under which, beneath the extremity of the joint, project two smaller corneous processes closely adhering to each other.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA (*Sarg*).

## **Argyroepeira auro-striata,** sp. n.

*Adult male*, length 2 lines.

*Cephalothorax* longer than broad, rounded behind; lateral marginal impressions at the caput slight, upper convexity moderate; colour dull orange-yellow. Clypeus equal in height to the diameter of one of the fore-central eyes.

*Eyes* on black, slightly tubercular spots; general position normal. The four centrals form a quadrangle a little longer than broad, its posterior and anterior sides nearly equal, if anything the anterior side slightly longest; the fore-central pair are largest; the posterior pair looked at from above and behind are very nearly straight; the anterior row strongly curved, the convexity of its curve directed forwards. The interval between the hind-centrals is greater than a diameter, and that between each and the hind-lateral next to it is less than two diameters.

*Legs* long, slender, 1, 2, 4, 3, those of the first and second pairs much the longest, armed with fine but distinct spines; along the femora of the fourth pair are the two rows of long bent hairs issuing from minute tubercles noted in respect to *Opas* (anteà, pp. 184, 185). Colour like that of the cephalothorax.

*Palpi* long, slender; cubital joint short, bent, clavate, somewhat subangular near its fore extremity on the upperside, whence there issues a long, straight, tapering, spine-like bristle; radial joint very long, double the length of the digital joint, enlarging gradually from the base to the extremity, with some long spine-like bristles towards the fore extremity; digital joint narrow-oval, with a strong, prominent, curved, obtusely-truncated process at its base directed outwards. Palpal organs prominent, consisting of a large oval lobe with a strong corneous process, and a strong, slightly curved, black, pointed spine at their extremity.

*Falces* moderate in length and strength, slightly divergent, similar in colour to the cephalothorax.

*Maxillæ*, *labium*, and *sternum* normal, the latter like the falces in colour, the two former suffused with brownish.

*Abdomen* oblong-oval, or somewhat cylindric in form; the upper part and sides are silvery, and there is a long wedge-shaped dull brownish-grey marking extending from the fore to the hinder end of the upperside; on each side of this towards the fore end are two blunt prominent spots of the same hue, and from the hinder part, on each side, two other short oblique lines run backwards. The sides are marked with three pretty distinctly marked, parallel, longitudinal, golden stripes on each side; at the beginning of the hinder slope are two distinct silvery spots in a transverse line. The underside has also two other similar but more elongate spots in a transverse line a little way in front of the spinners; the fore end of these is golden, and is in contact with a short, straight, transverse, golden stripe; the area between these spots is silvery.

The *female* measures 3 lines in length. It closely resembles the male in colours and markings; the *cephalothorax* is proportionately narrower, the indentations between the caput and thorax stronger, and the caput is larger in proportion; the underside of the abdomen is suffused with a golden hue, and the straight transverse golden stripe beneath is of an angular form, the space between it and the two silver spots being silvery.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

This spider is closely allied to *Argyroepeira hortorum*, Hentz, but may be distinguished from it (among other characters) by the central quadrangle of the eyes being as wide (or even a little wider) in front as behind, whereas in *A. hortorum* it is distinctly narrower in front than behind. The palpal organs also of *A. hortorum* are different in structure, and the genital aperture of the female is differently shaped.

The presence in this spider of the hairs on the hinder femora, thought to be distinctive of *Opas* (anteà, p. 184), and also of similar hairs in *A. hortorum*, Hentz, show that in this respect there is no difference between *Opas* and *Argyroepeira*. The total absence, however, of spines on the legs of the former still separates them.

## HUBBA *, gen. nov. (fam. Theridiidæ).

*Cephalothorax* broad-oval, length and breadth almost equal, broadest and round at the hinder part; general convexity moderate; normal grooves and indentations almost obsolete; the whole of the caput (in the male sex) gradually drawn out or elevated into a strong eminence projecting forwards, enlarged at the upper extremity (where the eyes are situated) and divided there into two obtuse segments, of which the anterior is largest and projects forwards.

*Eyes* large, arranged in four pairs—three on the posterior and one on the anterior segment of the caput. The eyes of the central pair, on the posterior segment, very nearly contiguous to each other, as are also those respectively of each of the other two (or lateral) pairs; these three pairs are almost equal in size. The anterior pair are smallest, placed at the fore corners of the anterior segment of the caput, and widely separated from each other.

*Legs* (from what remained—the third and fourth pairs only) moderate in length and strength; those of the fourth pair longest, furnished apparently with hairs only; the tarsi of the fourth pair not much more than half the length of the metatarsi.

*Falces* small, straight, vertical.

*Maxillæ* moderately long, broad and strong at the base, tapering somewhat to a point at the extremity, and greatly inclined over the labium, which is broader than high and rounded at the apex.

*Sternum* large, broad-heart-shaped, very convex, the posterior extremity very wide and obtuse.

*Abdomen* rather large, oval; upper convexity moderate; a large coriaceous quadrate plate, in the middle of the fore part underneath, includes the normal spiracular openings. Spinners short, compact, the four exterior ones of the same length, the inferior pair strongest.

### **Hubba insignis**, sp. n.

*Adult male*, length $\frac{2}{3}$ line (about 1·5 millim.).

The colour of the *cephalothorax*, *falces*, *maxillæ*, and *sternum* is orange-yellow; the *legs* rather paler, with the tibiæ and metatarsi slightly suffused with brownish; a group of recurved hairs directed backwards between the fore-central eyes.

The *eyes* are on black spots, and all, excepting those of the fore-central pair, are bright pearly-white. The posterior row is very slightly curved, the convexity of the curve directed forwards, the straight line of the

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* Nom. propr.

hind-central pair passing between the eyes of the lateral pairs. The four centrals form a quadrangle whose length is greater than its breadth and its anterior longer than its posterior side.

*Palpi* similar in colour to the legs, short; the cubital joint clavate and bent; the radial joint shorter than the cubital, rather produced and broadened at its outer extremity, but with no distinct apophysis; digital joint small, oval; palpal organs simple, neither very prominent nor complex.

*Abdomen* pale dull luteous-yellow.

*Hab.* GUATEMALA, Senahu (*Sarg*).

This remarkable spider is not unlike *Diplocephalus culminicola*, Sim.; but it belongs much more nearly to the typical *Theridion*, Walck., which it resembles in the form of the palpi.

The specimen above described was held fast in the falces of a large Salticid spider, *Parnœnus* (*Phidippus*) *cyanidens*, C. L. Koch, and was evidently unnoticed by the collector; its damaged state is thus sufficiently accounted for.

## ENNA *, gen. nov. (fam. Triclariidæ).

*Cephalothorax* broad, circular behind; lateral marginal indentations at the caput strong, broad and squarely truncated in front; upper surface convex, highest behind, posterior slope very abrupt, normal indentations slight. Clypeus prominent; thoracic indentation very small, longitudinal.

*Eyes* on tubercles in two transversely curved rows, the convexity of the curves directed forwards; the anterior row much the shortest and very slightly curved—in fact, looked at from in front, quite straight; the posterior row long and strongly curved. The fore-lateral eyes much the smallest, the hind-laterals rather the largest.

*Legs* long, 1, 4, 2, 3, not very strong, extended laterally, the tarsi short; armed with spines on the femora, tibiæ, and metatarsi.

*Falces* straight, moderate in length, powerful, and roundly prominent in front.

*Maxillæ* long, strong, straight, rounded at the outer, and strongly and obliquely truncated at the inner extremity.

*Labium* oblong, double as long as broad, and truncated at the apex; rather more than two-thirds the length of the maxillæ.

*Sternum* heart-shaped, as broad as long, its posterior extremity drawn out into a sharp point.

*Abdomen* short-oval. Spinners short, compact, the inferior pair strongest, but rather shortest. Colulus short, obtuse; immediately in front of it is a transverse slit opening probably to a spiracular organ.

This genus seems to be nearly allied to *Triclaria* as well as to *Dolomedes*. In general appearance it is more like the former; it has not, however, the slender flexible tarsi of that genus.

### Enna velox, sp. n.

*Adult male*, length 3–4 lines; *adult female*, length $3\frac{1}{2}$–$4\frac{1}{2}$ lines.

*Cephalothorax* of adult male yellow-brown, with a longitudinal, narrow, irregular or dentated stripe on each side pale yellow-brown, and a similarly-coloured tapering band running from the ocular area to the thoracic indentation; this band, however, is marked longitudinally with darker yellowish-brown. The height of the clypeus is half that of the facial space.

The *eyes* of the hind-central pair are much further apart than from the hind-laterals; the fore-centrals are a little further apart than from the fore-laterals. The length of the anterior row is just equal to the line

* Nom. propr.

formed by the hind-central pair. Each fore-lateral eye is its own diameter's distance from the hind-central eye on its side.

*Legs* long, laterigrade, dull brownish-yellow, immaculate, clothed with fine hairs; spines slender, moderately strong; terminal tarsal claws three, the superior pair with several denticulations at the hinder part.

*Palpi* moderate in length and strength, similar in colour to the legs; radial joint of a somewhat tumid form, longer and much stronger than the cubital, with a short, deep red-brown, slightly curved, tapering, but obtusely-ending, rather prominent apophysis at its extremity on the outer side; digital joint rather long, tapering, oval, narrower than the radial. Palpal organs neither very prominent nor complex.

*Falces* dark reddish-yellow-brown; fangs neither very long nor strong.

*Maxillæ* and *labium* similar in colour to the falces; *sternum* dull yellow.

*Abdomen* dull brownish-yellow, marked on each side of the median line of the upperside with a broad longitudinal irregular deep brown band meeting and coalescing with a series of several strong angular bars, or chevrons, of the same colour as the spinners on the hinder half; along the middle of the fore part are two dark brown lines in a long wedge form, the point directed backwards. The sides are marked with some dark brown horizontal streaks. There appears to be some variation in these markings in different examples, the dark brown preponderating and obscuring the paler ground-colour. The underside is a dingy yellow-brown, the spinners dull yellowish, and the upperside of the abdomen is covered with longish, prominent, slender, dark hairs.

The *female* resembles the male in colours and markings. The genital aperture is well marked and of characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## TRICLARIA, C. L. Koch.

### Triclaria connexa, sp. n.

*Adult male*, length $5\frac{1}{2}$ lines.

This species is intermediate in size between *T. extensa* (anteà, p. 174) and *T. habilis* (anteà, p. 173), to both which it bears a close general resemblance. From both, however, besides size, the distinct markings of the legs (a mixture on the femora of longitudinal and annular markings) distinguish it readily. The apophysis also at the outer extremity of the radial joint of the palpus is different in form: in *T. extensa* it is more curved and more prominent, and its extremity has a decidedly hooked form, which is absent in the present species; in *T. habilis* the radial apophysis is much shorter, broader, and has a somewhat notched termination. The structure of the palpal organs also differs in all the three species.

Females of various sizes, but all immature, agreed in the distinct markings on the legs.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*: ♂); GUATEMALA (*Sarg*: ♀).

### Triclaria habilis.

*Triclaria habilis*, Cambr. anteà, p. 173.

In the description, *l. c.*, of this species the legs are stated to be annulated with dark yellow-brown. This is a mistake, arising from the belief (when the description was made) that several females accompanying it, in which the annulations were distinct, were of the same species. It appears to me now most probable that these females are of the species just before described, *T. connexa*, and that the absence of annulation in *T. habilis* is normal and not owing to the faded condition of the specimens.

## ARGYROEPEIRA, Emerton.

### **Argyroepeira lugens,** Cambr.

*Opas lugens,* Cambr. anteà, p. 185, t. 23. fig. 3.

For the reasons given above, p. 229, in respect to *A. pulcherrima*, Keys., this species (*A. lugens*) must also be referred to the genus *Argyroepeira*, unless some other distinction can be found beyond the absence of spines on the legs to differentiate it.

## DECETIA, gen. nov. (fam. Pholcidæ; group Prisculeæ, Sim.).

*Cephalothorax* rather broader than long, almost circular; thoracic indentation very strong; behind it there is a somewhat angular or subconical elevation of the thorax, at the beginning of the posterior slope. Ocular area at the fore extremity forming a distinct but not very strong prominence. Clypeus of great height, strongly impressed below the eyes, but thence sloping forwards to the base of the falces; its height is at least equal to one and a half times the length of the ocular area.

*Legs* long, slender (those of the first pair were wanting), 4, 2, 3, apparently furnished with hairs only.

*Eyes* rather closely placed, in three groups, three on each side of the fore extremity of the ocular area in a triangle, the third group of two (smallest of the eight) nearly contiguous and in an almost straight line with the anterior eye of each of the lateral groups, from which they are separated by an interval nearly equal to that which separates them from each other. The posterior row is straight. The hind-centrals, which are rather smaller than the hind-laterals, are contiguous to them. The laterals are of about equal size (perhaps the fore one is a little the largest), and they are near together but not quite contiguous. The interval between the hind-centrals is distinctly more than a diameter; the central quadrangle is broader than long, and its fore side much the shortest.

*Maxillæ* normal.

*Labium* and *sternum* closely united, the junctional line just discernible. Sternum much broader than long, its posterior extremity broadly and sharply truncated in a line with the middle of the hinder end of the coxæ of the fourth pair of legs, which are thus very wide apart.

*Abdomen* short, much elevated above; at its fore extremity on the underside is a large, triangular, corneous, deep red-brown shield, including the genital process and the ordinary spiracular plates; halfway between these and the spinners is a long, strong, transverse, slightly angular fissure, probably leading to other spiracular organs.

This genus is closely allied to *Priscula*, Sim., resembling it in the relative size and disposition of the eyes and general form of the abdomen, but differing in the form of the sternum and in the absence of the chitinous band between the clypeus and falces.

### **Decetia incisa,** sp. n.

*Adult female*, length very nearly 2 lines.

*Cephalothorax* pale orange-yellow, furnished above with bristly hairs, and with a broad central dark yellow-brown longitudinal band, somewhat broken and interrupted at the ocular area, and a lateral broken stripe of the same colour on each side, from which issue slight, indistinct, converging lines to the thoracic junction.

*Legs* similar in colour to the cephalothorax, with the genuæ and an annulus at the fore extremity of the femora and tibiæ yellow-brown; tarsi very short.

*Falces* small, rather projecting, straight, subconical, yellow-brown.

*Maxillæ* dull orange.

*Labium* dark yellow-brown.

*Sternum* dull orange, broadly margined with dark yellow-brown.

*Abdomen* much elevated in a blunt subconical form behind. It is of a dull orange-yellow or golden colour, and

clothed with short hairs marked with blackish on the steep hind slope. The genital process is small, but of peculiar and characteristic form.

*Palpi* short, slender, destitute of a terminal claw; colour yellowish suffused with yellow-brown.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

"A house spider."

## ARIADNE, Savigny (fam. Dysderidæ).

### Ariadne pilifera, sp. n.

*Adult female*, length 9 lines; length of the cephalothorax $3\frac{1}{2}$ lines, breadth of ditto 2 lines.

The whole of the fore part, excepting the tarsi of the legs (which are of a paler red-brown), deep shining blackish-brown, tinged in some lights with reddish; abdomen dull leaden-black.

The *cephalothorax* is long and narrow, its length nearly double its width, truncate before, lateral marginal constrictions very slight, furnished with abundant long reddish hairs in front, and more or less all over with similar but shorter ones.

*Eyes* six: the four constituting the posterior row form a straight line longer than the two of the anterior row; the hind-centrals are almost contiguous to each other, and removed from the hind-laterals by an interval exceeding the length of the line formed by the latter. The hind-laterals are the largest of the six, and, with the fore-laterals, are placed a little obliquely and contiguously on a strong tubercular prominence on each side.

*Legs* moderately long, 1, 2, 4, 3, strong, densely clothed with long, dull reddish hairs, especially those of the first and second pairs, which are also furnished beneath with strong spines arranged in two parallel rows. Those beneath the tibiæ of the first pair are in five pairs. The tarsi end with three strong curved claws, of which the two superior ones are pectinated.

*Falces* moderate in length and strength, clothed in front with numerous long hairs.

*Palpi* short, strong, like the legs, densely piliferous; digital joint furnished with a nearly straight spine-like claw.

*Maxillæ*, *labium*, and *sternum* normal.

*Abdomen* elongate-oval, dull mouse-coloured blackish, clothed with pale reddish hairs. Spinners short, compact. The genital aperture consists of a simple elongate transverse opening behind a somewhat raised, shining, oval prominence. Behind the posterior extremity of the sternum, between the coxæ of the fourth pair of legs, is a small but distinct shining reddish-brown chitinous plate of a truncate conical form, apparently beneath the connecting pedicle; on each side of it is a small oblique slit or orifice (perhaps spiracular openings?). The shape of this plate is probably a good specific character.

*Hab.* MEXICO, Ventanas in Durango (*Forrer*).

### Ariadne comata, sp. n.

*Adult female*, length $5\frac{1}{2}$ lines; length of the cephalothorax $2\frac{1}{2}$ lines, breadth of ditto rather less than $1\frac{1}{2}$ lines.

In general form, colours, and appearance this spider is like *A. pilifera*, and it is equally hairy; it is, however, much smaller. The spines beneath the tibiæ of the first pair of legs are four instead of five pairs, and the chitinous plate between the coxæ of the posterior legs is distinctly triangular; the apex of the triangle directed forwards. The form also of the genital aperture differs slightly, and the eyes are rather more closely placed, so that the lateral and central groups are nearer together, the interval between the hind-central and the hind-lateral group not exceeding, if quite as much as, the length of the line formed by the hind-central eyes. The lateral eyes are also placed more obliquely, so that the anterior row is shorter in proportion to the posterior than in *A. pilifera*.

*Hab.* MEXICO, Orizaba (*H. H. Smith*).

## ARGIOPE, Savigny (fam. Epeiridæ).

### **Argiope godmani,** sp. n.

*Adult female*, length 14½ lines; length of the cephalothorax 4 lines.

*Cephalothorax* of normal form, black-brown, clothed with short, fine, grey, adpressed pubescence.

*Eyes* in the ordinary position; those of the fore-central pair largest, seated at the extremity of a strong prominence separated by somewhat more than a diameter's interval and forming a line rather longer than that of the two hind-central eyes, which are smallest of the eight; those of each lateral pair are contiguous to each other, and seated on a strong protuberance. The three protuberances placed in a transverse and nearly straight line.

*Legs* moderate in length and strength, 1, 2, 4, 3 (1 and 2 very nearly equal in length), of a deep black-brown colour, furnished with short hairs and a few short fine spines.

*Palpi* short, dark brown, the humeral and cubital joints more or less yellow; furnished with hairs and fine spines.

*Falces* powerful, straight, perpendicular, strongly prominent in front; colour deep black-brown, marked with a strongish stripe of somewhat orange-yellow towards the extremity on the inner side.

*Maxillæ* and *labium* of normal form, deep black-brown, with a broadish margin at their extremity of reddish-orange-yellow.

*Sternum* deep black-brown, with a broad, longitudinal, tapering, orange-yellow central band, notched or indented towards the hinder extremity, and there is also a small prominent point on each side just before the indentation.

*Abdomen* large, rather elongate-oval, slightly pointed behind, where it extends considerably over the spinners; its anterior extremity is rather strongly protuberant on each side, giving an indented or broadly notched appearance. Its colour is black, marked on the upperside with dull orange-yellow distinct markings of various sizes and shapes, but forming a symmetrical pattern. The largest of these are along the outer margins, extending from the fore corners to the spinners; four round orange-yellow spots form an oblong figure in the middle of the upperside, the anterior pair largest; and halfway between the posterior pair and the spinners is a short transverse line of several minute orange spots. The lower part of each side is marked with longitudinal, broken, subhorizontal, and oblique yellow lines; the underside has a strong longitudinal, irregular, yellow stripe on each side of the fore half, and on each side of the spinners are two elongate spots—a large one in front, a fine one behind; and between the longitudinal stripes in front is a longitudinal series of four pairs of small yellow spots.

*Hab.* GUATEMALA, Guatemala city (*O. Stoll*).

## EUTICHURUS, Simon * (fam. Drassidæ).

Closely allied both to *Chiracanthium*, C. Koch, and *Clubiona*, Latr.

*Cephalothorax* much broader than long; caput well developed, truncate in front; lateral marginal constrictions at caput tolerably strong.

*Eyes* in four pairs on two transverse, subparallel, curved rows, occupying the whole width of the caput; curve of posterior row with the convexity directed backwards, that of the anterior row having its convexity directed forwards; lateral pairs and fore-centrals seated on strong tubercular prominences. Clypeus very narrow. Eyes of posterior row equally separated; four centrals form a quadrangle whose width (transversely) is greater than its length, and its posterior rather longer than its anterior side; fore-central pair much the largest.

*Legs* rather long, moderately strong, not greatly different in length, 4, 1, 2, 3, furnished with fine hairs and a few spines. A scopula beneath the tarsi and metatarsi, nearly the whole length of the latter on the two first pairs, but only a little way beneath the metatarsi of the third and fourth pairs; terminal tarsal claws two, with claw-tuft.

*Falces* strong, straight, and a little projecting forwards.

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* In August 1896 the spider here described was submitted to Mons. Simon for his opinion, and returned to me as sp. n. of *Eutichurus*, Sim., the description of which I have not yet seen.

*Maxillæ* similar to those of *Clubiona*. *Labium* longer than broad; apex narrower than the base, and slightly hollow-truncate.

*Sternum* longer than broad, heart-shaped, hollow-truncate before, pointed behind.

*Abdomen* oval. Spinners of superior pair longest and strongest, wide apart; terminal joint tapering, and longer than the basal. Anal prominence triangular, sharp-pointed, and furnished near the extremity with some minute hair-bearing tubercles; colulus short, obtuse.

### **Eutichurus putus,** sp. n.

*Adult female*, length very nearly 6 lines.

*Cephalothorax* dull yellowish, clothed in front and on the sides with pale yellowish hairs. Caput strongly suffused, mostly in the ocular region, with red-brown; some reddish-brown converging lines also on the sides.

*Legs* pale orange-yellow; two spines (in a transverse row) beneath the hinder part of the metatarsi, and three beneath the tibiæ of the first pair; two spines also beneath the metatarsi of the second pair and one beneath the tibiæ.

*Palpi* rather long, slender, orange-yellow; digital joint dark yellow-brown, thickly clothed with hairs; terminal spine very minute.

*Falces* prominent at their base in front; deep reddish-brown, clothed with long, slender, pale, prominent hairs.

*Eyes* of each lateral pair separated by half a diameter.

*Maxillæ* and *labium* reddish-yellow-brown.

*Sternum* orange-yellow-brown, suffused with a darker hue on the margins.

*Abdomen* dull clay-yellowish, clothed with fine pale hairs; position of the dorsal vessels paler, marked by two converging dusky lines and surrounding its extremity; at the middle of the upperside are four small dark red-brown spots, forming a quadrangle whose length is greater than its width, and its anterior shorter than its posterior side. The genital aperture is small but of characteristic form.

*Hab.* Panama, Veraguas (*Boucard*).

## CORYSSOCNEMIS, Simon (fam. Pholcidæ).

### **Coryssocnemis simoni,** sp. n.

*Adult female*, length 2–3 lines.

*Cephalothorax* round behind, obtusely pointed in front, flattened above. Caput divided from the thorax by strong indentations. Clypeus large, rounded, and prominent. Colour pale yellowish-white; a broad, dark, well-defined though jagged-edged band of dark brown runs from the middle of the clypeus to near the posterior extremity of the thorax, and on each side is a narrower submarginal band of the same colour, not reaching further than the marginal lateral indentation, and much jagged on its inner edge. Clypeus very high, much impressed below the eyes and prominent at the lower half; perpendicular height twice that of the ocular area.

*Eyes* forming a transverse oblong-oval at the upper fore extremity of the caput; three large ones on each side, almost contiguous to each other, form a strong curve; and between the anterior eyes of each curve, and almost in a straight line with them, are two minute eyes, near together but not touching, in a transverse row. Taken as in two transverse curved rows the posterior row is longest, and the slight convexity of their curves is directed backwards: the eyes of the anterior row are separated by very small but equal intervals, and their upper margins form a straight line; the fore-lateral eyes are largest of the eight; the two at each end of the hinder row are very nearly contiguous to each other. The hind-centrals are separated by one and a half diameters, and the interval between the eyes of each lateral pair is equal to that which divides those of the anterior row. The four central eyes form a large quadrangle whose transverse breadth is considerably the greatest, and whose posterior side is less than its anterior.

*Legs* very long, slender, 1, 4, 2, 3. Colour orange-yellow-brown; a dark brown annulus at the fore extremity of the femora and tibiæ, the latter also brown at the hinder extremity; on each side of the annulus of the femora is a narrower pale yellow one; the genuæ are also dark brown. They are furnished with coarse hairs arranged in longitudinal lines. The tarsi are multiarticulate.

*Palpi* short, slender, and of a pale dull brownish hue.

*Falces* small, perpendicular, and of a dull brown colour. At the extremity, on the inner side near the point of the fang when at rest, is a strong tooth with two or three minute tubercles at its base.

*Maxillæ* long, of a narrow-oblong form, greatly inclined towards and meeting over the labium. Colour brown, tipped with pale whitish.

*Labium* double as broad as high, rather narrower at the apex than at the base. Colour brown, whitish at the apex.

*Sternum* broader than long; margins scalloped, with a slight prominent point opposite the coxal joint of each pair of legs; posterior extremity broadly and a little roundly truncate. Colour dark brown.

*Abdomen* large, triangular, the height to the apex of the triangle greater than the length from the cephalothorax to the spinners; profile line of the anterior or upper side curved. Colour dark dull sea-green, with a largish, somewhat cuneiform, pale marking on the fore half of the upperside, and numerous small pale spots in lines forming a symmetrical pattern, but not easy to describe, on the hinder part of the upperside, the ends, and the posterior side; at the middle of the base of the latter, just above the spinners, is a longitudinal pale stripe reaching less than halfway to the apex, to which it continues in a fine pale line. Genital aperture small, but immediately behind it across the middle of the abdomen is a broadish, chitinous, greenish-brown plate, and close in front of it is a large conical prominence of the same colour, its point directed forwards. Spinners small, compact.

*Hab.* MEXICO, Omilteme in Guerrero, 8000 feet (*H. H. Smith*).

Mr. Smith says, in a note:—"These spiders are found in the forest on the lower side of overhanging rocks, logs, &c.; they make a loose, irregular, horizontal web of thin lines, seven or eight inches in diameter."

## ELAVER *, gen. nov. (fam. Drassidæ; subfam. Clubioninæ).

The main characters of this genus are like those of *Clubiona*, Latr., but it differs in the armature of the anterior legs—those of the first and second pairs in the male having beneath the tibiæ three pairs of spines, and a single spine besides towards the base on the inner side. The spinners also of the superior pair have, in both sexes, a short but distinct second joint, longest in the female.

### **Elaver tigrina,** sp. n.

*Adult male*, length $5\frac{1}{4}$ to a little over 6 lines; *adult female*, length $5\frac{1}{2}$ lines.

*Cephalothorax* (male) oval, at least one-half longer than broad; profile line scarcely curved between the ocular area and the hinder slope, roundly truncate in front; lateral marginal constrictions at caput slight. Colour dull orange-brown, deepening into dark red-brown forwards. Clothed with fine, pale yellowish-grey pubescence. Height of clypeus less than the diameter of one of the fore-central eyes.

*Eyes* in a regular segment of a circle; posterior row longest, very slightly curved, the convexity of the curve directed backwards, that of the anterior row much stronger and directed forwards. The interval between the hind-centrals is slightly greater than that between each and the lateral eye next to it. The fore-centrals are largest of the eight, and the interval between them is equal to an eye's diameter, each being rather nearer to the lateral eye on its side. The four central eyes form a quadrangle whose transverse diameter is greater than its longitudinal, and its fore side distinctly shorter than the hinder one. The interval between the eyes of each lateral pair is near about equal to that between the fore-centrals.

*Legs* rather long, moderately strong, 4, 1, 2, 3, clothed with hairs, some of which are very fine and prominent. Spines rather long, moderately strong, distributed very like those in *Clubiona*, excepting beneath the

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* Nom. propr.

tibiæ of the first and second pairs (see characters of genus). Colour similar to that of the cephalothorax, excepting the tibiæ, metatarsi, and tarsi, which have a deeper hue. Scopula beneath the tarsi and metatarsi of the first and second pairs rather dense, also beneath the tarsi and anterior part of the metatarsi of the third and fourth pairs. Tarsal claws 2, and beneath them a small compact claw-tuft.

*Palpi* rather short. Colour like that of the legs; cubital joint short; radial joint double the length of the cubital, curved, and with a strong, somewhat triangular, deep red-brown apophysis at its fore extremity on the outer side; digital joint large, oval, considerably longer than the radial, with which it is thickly furnished with long coarse hairs, those at the fore half of the digital joint being of more equal length, dense, and of a pale yellowish-grey colour. Palpal organs highly developed, prominent, consisting principally of an elongate ridge-like corneous lobe. At the fore extremity of the humeral joint are four spines, three in a transverse row and one just behind them.

*Falces* moderately long, strong, straight, a little directed forwards. Colour deep red-brown. Furnished in front with numerous coarse hairs.

*Maxillæ* dark yellow-brown, long, much broadest at the extremity, which is rounded on the outer side and obliquely truncated on the inner side.

*Labium* higher than wide; sides straight, apex slightly emarginate. Colour like that of the falces.

*Sernum* oval, flattish, slightly emarginate in front, pointed behind. Colour yellow.

*Abdomen* elongate, semicylindric, somewhat roundly truncate in front, obtusely pointed behind. It is of a dull yellowish colour, and clothed pretty thickly with longish paler hairs; the fore half of the upperside is covered with a shining, somewhat coriaceous epidermis of a yellow-brown hue. The ordinary central, longitudinal, tapering marking is indistinctly visible on the fore half, and has a prominent point on each side at a third of its length from the posterior end, where it is followed by six or seven tolerably distinct transverse dark brown lines or stripes, formed by the remains of the normal triangular bars or chevrons continued on each side by curved, oblique, lateral bars. Spinners long; inferior pair strongest, superior pair with a short second joint.

The *female* is rather smaller than the male. The eyes appear to be of a more uniform size, and the markings on the abdomen are more distinct. The spines beneath the tibiæ of the first two pairs of legs are four only (in two pairs). The genital aperture is large and of a very distinct and characteristic form.

*Hab.* Mexico, Orizaba (*H. H. Smith*).

Note by Mr. Smith:—"Spider in a crevice in bark on the lower side of a large projecting tree overhanging a bank by the side of a river, a somewhat shady place. The spider had a soft, white, silken egg-case, and under the place of concealment was a thin irregular web about five inches in diameter stretched over the bark." In another case "brushed from weeds and bushes."

## **Elaver sericea,** sp. n.

*Adult female*, length $5\frac{1}{2}$ lines.

This species is nearly allied to *E. tigrina*, which it resembles closely, but the profile of the cephalothorax appears to be more convex. The whole of the fore part is orange-yellow, the cephalothorax, falces, maxillæ, and labium tinged with brown. The eyes of the posterior row are equidistant from each other, and the height of the clypeus is equal to half the diameter of one of the fore-central eyes. The abdomen shows traces of a similar pattern to that of *E. tigrina*, the remains of it being here represented by three longitudinal converging lines of brown spots and markings on the hinder half of the upperside. The clothing of the abdomen is more silky, and the genital aperture is characteristic and of a different form from that of *E. tigrina*.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith's note on this spider is "shaken from a branch of fruit, edge of forest; there were a few short irregular lines in the fruit."

### **Elaver depuncta,** sp. n.

*Adult female*, length 6 lines.

Nearly allied to *E. tigrina*, but of a duller browner hue, and almost destitute of any pattern on the abdomen, which is of a uniform dull yellowish-brown, the slightest traces of some transverse bars, somewhat like those of *E. tigrina*, being just discernible. The falces, maxillæ, and labium are dark brown tinged with reddish, and the sternum is yellowish with its margins suffused with blackish-brown. The legs are pale yellowish-brown, deepening into reddish-yellow-brown on the metatarsi and tarsi. The cephalothorax is yellow-brown, darker on the caput. The scopula on the tarsi and metatarsi of the 1st and 2nd pairs of legs is broader and denser, and beneath the tibiæ of the 2nd pair there are only 3 spines (2 . 1). The genital aperture differs from that of both *E. tigrina* and *E. sericea*.

*Hab.* MEXICO, Orizaba (*H. H. Smith*).

### **Elaver placida,** sp. n.

*Adult female*, length scarcely $2\frac{1}{2}$ lines.

The *cephalothorax* and falces are light yellow-brown; the legs and palpi of a paler hue, as also are the maxillæ and labium, the sternum being rather more yellow.

In general form this spider resembles closely those of the same genus before described. The eyes, however, of the hind-central pair are distinctly but not greatly further from each other than each is from the hind-lateral eye of the same row on its side; and there seemed to be but little, if any, difference in the size of the eyes of the anterior row—those of the hinder row being rather smaller. The spines beneath the tibiæ and metatarsi of the 1st and 2nd pairs of legs resemble those of the other described species—one pair beneath the metatarsi, two pairs beneath the tibiæ. The scopula beneath the tarsi and metatarsi of the first and second pairs of legs is much less dense, and is absent from the third and fourth pairs; the claw-tuft also is smaller.

The *abdomen* is of a pale dull greyish-yellow hue, with brown markings very similar to those of *E. tigrina*, but the angular bars or chevrons have their apices open, and they are distinctly though not greatly separated from the lateral oblique ones. The genital aperture is small and of a characteristic and quite distinct form from that of either of the other species. Spinners yellow, normal.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## CRAGUS, Cambridge.

### **Cragus inornatus,** sp. n.

*Adult male*, length rather over 2 lines.

This spider is nearly allied to *Cragus pallidus*, Cambr. (*anteà*, p. 215, t. 26. fig. 10), to which it bears a close resemblance in general structure and appearance. The abdomen, however, is longer and slenderer in proportion, and the radial joint (of the palpus) and its apophysis, as well as the palpal organs, are of a different form; these differences can only be appreciated by reference to the respective figures of each drawn from the same point of view. One difference, however, is that the apophysis of the radial joint of the palpus in the present spider is not emarginate, like that of *C. pallidus*.

In an immature female, which appears to be of the same species, there is a transverse slit on the underside of the abdomen slightly nearer the fore extremity than the hinder one. I can find, even with the microscope, no such slit in the adult male above described.

On re-examining the type of *C. pallidus*, Cambr., I find that there is a transverse slit beneath the middle of the abdomen, but only just discernible under the microscope. It is very probable, however, that this character belongs to the genus, though liable to be obsolete or scarcely visible from some cause or other in the male. If this character is a reliable one this spider will rank among the Anyphæninæ.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## SYNÆMA, Simon.

### **Synæma polita,** sp. n.

*Adult male*, length $1\frac{1}{3}$ to $1\frac{2}{3}$ lines; *adult female*, length 2 lines.

*Male.—Cephalothorax* tolerably convex above, the profile line from the posterior extremity to the upper edge of the clypeus forming a strong, even curve; normal grooves and indentations almost obsolete. Surface smooth; furnished with a few long, strong, prominent bristles. Colour deep rich blackish-brown. Height of clypeus equal to about half the distance between the fore-central and hind-central pairs of eyes.

*Eyes* on pale yellow-brown tubercles, occupying nearly the whole width of the caput. The four central ones form, as nearly as possible, a square (if anything slightly longer than wide) whose fore side is a little, but distinctly shortest; the space between the fore-centrals is rather greater than that between each and the fore-lateral next to it. The fore-laterals are largest, the hind-centrals smallest. Both rows have the convexity of their curve directed forwards. The curve of the front row is strongest. The intervals between the eyes of the posterior row are equal.

*Legs* long, moderately strong, 2, 1, 4, 3; 2 and 1 scarcely differ in length; all the joints, excepting the tarsi, pretty numerously and strongly spinose. First and second pairs deep blackish-brown, the tarsi and metatarsi yellow, the tibiæ with a dull orange-yellow annulus near the hinder extremity. Third and fourth pairs much shortest and of a uniform yellow, perhaps slightly tinged with dull orange.

*Palpi* short, yellow, digital joint slightly tinged with brown; furnished with bristles and bristly hairs. Cubital and radial joints short and of equal length; the latter has at its extremity on the outer side a small, prominent, tapering, slightly curved apophysis; the digital joint is oval, of moderate size, its length equal to that of the radial and cubital joints together. The palpal organs are very simple, consisting of a flattish round corneous lobe, around which is coiled a long, closely fitting, tapering black spine issuing from near the base on the outer side.

*Falces* moderate in length and strength, subconical, and of a deep brown colour.

*Maxillæ*, *labium*, and *sternum* yellowish-brown.

*Abdomen* short-oval, the upperside covered with a shining, polished, deep black-brown coriaceous plate, furnished with a few prominent bristly hairs; sides longitudinally rugose; the underside of a dark brown colour.

The *female* (which, notwithstanding its remarkable difference of colour, I believe to be of the same species as the male above described) has the cephalothorax yellow-brown, the ocular area a little, and the sides much darker; the legs of the first and second pairs dark yellow-brown, with the tarsi and metatarsi and an annulus near the base of the tibiæ yellow; the third and fourth pairs uniform yellow. The abdomen is subtriangular, the hinder part much the widest, the angles strongly rounded; the upperside is dull white, with very faint grey traces of the normal Thomisid pattern, and a few prominent brown strong bristles; the sides and underside dull uniform sooty-brown. The genital aperture is small and indistinct, but characteristic.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## DIÆA, Thorell.

### **Diæa spinigera,** sp. n.

*Adult male*, length $1\frac{1}{3}$ lines.

General form and structure normal. The whole spider (legs, palpi, cephalothorax, and abdomen) is furnished with strong, prominent, black spines issuing from minute tubercles; those on the fore and hinder parts of the cephalothorax, the abdomen, and the upperside of the first and second pairs of legs being the longest and strongest. *Cephalothorax* yellow, slightly tinged with orange, and with an irregular broken yellow-brown longitudinal band along the upper part of each side.

*Eyes* small, on strongish, subconical, whitish tubercles. The fore-laterals slightly largest. The interval between the hind-centrals is distinctly less than that between each and the hind-lateral eye on its side, and that between the fore-centrals is very slightly greater than between each and the fore-lateral next to it. The four central eyes form a quadrangle whose length is greater than its breadth and its posterior

slightly shorter than its anterior side. The height of the clypeus is nearly equal to half that of the facial space, or at any rate more than one-third of it.

*Legs* long, rather slender, 2, 1, 4, 3; 2 and 1 nearly equal in length; 3 and 4 much shortest; spines strong, and on all the joints excepting the tarsi and metatarsi; colour yellow, with a broad yellowish-brown annulus at the anterior extremity of the tibiæ, and another of less extent and distinctness at the anterior extremity of the tarsi and metatarsi.

*Palpi* short, similar in colour to the legs. Cubital and radial joints short; the latter is the shorter and has a strongish apophysis at its extremity on the outer side, as long or longer than the joint, somewhat widened and flattened and emarginate at its extremity, the upperside of which is prolonged into a somewhat nail-like, slightly curved, blunt-pointed, corneous termination; the digital joint is of moderate size and broadish-oval form. The palpal organs are simple, consisting of a rather flattened-spherical corneous lobe, round the outer margin of which runs a long, slender, tapering black spine, issuing from its inner side; the extremity of this spine forms a circular coil on the outside of the joint, in front of and below the point of the radial apophysis.

*Falces* rather small, subconical, and of a yellowish colour.

*Maxillæ*, *labium*, and *sternum* yellow.

*Abdomen* oval, rounded before, obtusely pointed behind, pale yellowish, covered on the upperside with almost confluent whitish cretaceous-looking spots, leaving a pale longitudinal central tapering stripe on the fore half. Spines on the abdomen black, long, strong, and very prominent.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## PEDO, Cambridge.

### **Pedo plumosus,** sp. n.

*Adult female*, length very nearly 4 lines.

The general hairy covering of this spider, at any rate mostly on the abdomen and uppersides of the legs, consists of plumose hairs, rather long, but lying flatly on the surface, and the pattern on the abdomen appears to be chiefly, if not entirely, due to the colours of these hairs. On close examination of *P. ornatus* (anteà, p. 220, t. 26. fig. 14), the type of the genus, I find that the hairs are similarly formed in that species. This character was overlooked in the description (*l. c.*).

The *cephalothorax* is of a deep rich reddish-brown, sprinkled with fine grey plumose pubescence.

The *eyes* are, in their general position, like those of *P. ornatus*; the interval between the hind-centrals is distinctly greater than that between each and the hind-lateral eye next to it.

The *legs* have the normal generic armature. The first and second pairs have their femora, and the two posterior pairs have their femora, tibiæ, and genuæ, very nearly similar in colour to the cephalothorax; the rest of the first two pairs is light brownish-yellow, that of the two hinder pairs is of a darker brown, and all are more or less clothed thinly with light grey plumose hairs or pubescence.

The *falces* are similar in colour to the cephalothorax, strong, prominent towards their base in front, and furnished with strong prominent bristles.

The *palpi* are dark yellow-brown, the terminal claw very fine.

The *maxillæ* are normal in form; their inner sides and extremities are furnished with a dense fringe of strong, dark grey, plumose hairs. The colour of the maxillæ is like that of the cephalothorax, with a broad, well-defined white inner margin.

The *labium* is similar in colour to the maxillæ, the apex white.

The *sternum* is similar to the cephalothorax in colour, and sprinkled with grey plumose pubescence.

The *abdomen* is of a short, broadish-oval form; of a dark slightly chocolate-brown hue on the sides; underside and hinder extremity covered thinly with grey plumose hairs. Along the middle of the upperside, from the fore-end to a little way above the spinners, is a broad, central, longitudinal, foxy-red band, sprinkled with white hairs, and occupying the greater part of the upperside; this band is broadest near the middle, where it has a slightly dentate margin on each side, and the plumose hairs on it are some of them grey. On the hinder part just above the spinners is a large, somewhat quadrate figure, formed by a distinct marginal border of white hairs; the lower extremity of the figure, however, is not defined, and there is

an indistinct, whitish, slightly oblique or nearly vertical stripe issuing on each side from the central band, formed by white hairs, as well as another somewhat similar at the anterior margin. The spinners are short and compact; just in front of them is the colulus, of small size and subconical form, and close in front of it is a very distinct transverse opening, leading doubtless to a spiracular organ; a similar opening exists also in *Pedo ornatus*, but is not so conspicuous. The genital aperture is characteristic, though much concealed by hairs.

*Hab.* MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

## PIRATA, Sundevall.

### **Pirata felix,** sp. n.

*Adult female*, length slightly over $1\frac{1}{2}$ lines.

General form and structure normal. Colour of the cephalothorax yellow, slightly tinged with orange; a broad yellow-brown longitudinal band runs on each side of the median line, leaving the central yellow band tapering to the thoracic junction, and thence with parallel sides to the hinder extremity; on the fore-half of this central band is an elongate, dark yellow-brown, **V**-shaped marking, whose fine point joins in with the thoracic indentation. The lateral margins are irregularly marked with dark brown.

The *eyes* of the second (or middle row) are much the largest of the eight, and with those of the hinder row form a square whose posterior side is longest. The anterior row is slightly shorter than the middle one and the convexity of its slight curve is directed forwards; its two central eyes are largest.

The *legs* are moderate in length and strength, 4, 1, 2, 3; similar in colour to the cephalothorax, with distinct but pale yellow-brown annuli on all excepting the tarsal joints. Spines long and rather strong.

*Falces* pale yellow-brown.

*Palpi* similar to the legs in colour, indistinctly annulose.

*Maxillæ* and *labium* tinged with brown.

*Sternum* yellow.

*Abdomen* black-brown, with a narrow, pale greenish-yellow-brown longitudinal central stripe on the fore-half, edged by a black line, and with a sharp point at its hinder end; following this, to the spinners, are four or five transverse, slightly angular, yellow lines or chevrons, the two anterior ones much the longest; also on either side of the fore-extremity is a somewhat irregular oblique yellow longitudinal line. The underside is yellow, and the genital aperture small but of characteristic form.

A very small but distinct species.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## EPEIRA, Walckenaer.

### **Epeira scutigera,** sp. n.

*Adult female*, length from slightly over 2 to rather more than $2\frac{1}{2}$ lines.

*Cephalothorax* of ordinary form; pale yellow-brown in colour, clothed with grey hairs and with darker brown lateral converging markings, and a central longitudinal quadrate one on the caput, continued backwards in a line through the thoracic junction and forwards in two short lines to the hind-central eyes.

*Legs* rather short, 1, 2, 4, 3, like the cephalothorax in colour, and more or less distinctly annulated with brown; spines short, numerous, but not very strong.

*Eyes* of central quadrangle forming very nearly a square, whose posterior side is slightly the shortest; hind-central eyes largest, and separated from each other by rather more than a diameter, and by about the same interval from the fore-central eyes.

*Falces* tolerably strong, pale brownish-yellow, marked in front with an oblique brown stripe.

*Palpi* short, similar to the legs in colour and markings.

*Maxillæ* yellow-brown, broadly margined at the extremity and on the inner side with brownish-yellow.

*Labium* brownish-yellow, with a pale yellowish apex.

*Sternum* brownish-yellow, its margins broadly clouded with brown.

*Abdomen* heart-shaped, or somewhat triangular, with the anterior margin strongly rounded; the posterior

extremity is pointed, dropping perpendicularly and projecting over the spinners. Its colour on the sides and upperside is dull, dusty whitish, tinged with yellow, and the centre of the upperside is occupied by a large deep rich brown area of the same shape as the abdomen, and sharply defined on the somewhat sinuous margins, which are edged with a narrow, clear yellowish-white line. The underside of the abdomen is marked with a dull blackish-brown central patch, bisected by a strong elongate white spot or bar; a dusky blackish line runs on either side of the central patch from near the spinners to the spiracular orifices. Genital aperture of characteristic form, with a pointed process running forwards from its anterior margin.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## BION *, gen. nov. (fam. Epeiridæ).

*Cephalothorax* large, longer than broad; thorax round; caput large, produced forwards; slightly converging on the sides forwards, its width at the eyes being rather less than at the occiput; profile, from the fore-central eyes greatly arched, forming, to the posterior extremity, almost a semicircle, slightly flattened at the thoracic junction; lateral marginal indentations strong, as are also the oblique indentations at the junction of the caput and thorax; clypeus not very high.

*Eyes* in the three usual Epeirid groups, and occupying the whole width of the caput. The fore-centrals are seated on a strong tuberculiform prominence; the four centrals form a trapezoid longer than broad, and its anterior side shortest; hind-centrals largest; those of each lateral pair are contiguous and seated obliquely on tubercles. Taken in two transverse rows, the posterior row (looked at sideways and from above) is very nearly straight; the anterior row has a strong curve, whose convexity is directed forwards. The height of the clypeus is about equal to the interval between the fore and hind-central pairs of eyes.

*Palpi* short.

*Falces* long, moderately strong, straight.

*Maxillæ* short, strong, very convex in front, very broad and rounded at their extremities, and inclined over the labium.

*Labium* broader than high, somewhat triangular.

*Sternum* rather elongate, heart-shaped, its hinder extremity truncate and produced between the coxæ of the fourth pair of legs.

*Abdomen* very short, heart-shaped, the anterior side much rounded; the posterior extremity obtusely pointed; the upper surface covered with a coriaceous, shining shield. Spinners short, compact.

### **Bion brevis,** sp. n.

*Adult male*, length 1 line, or slightly less.

*Cephalothorax* rich reddish-brown, covered with coarse granulations and short hairs.

*Eyes* of hind-central pair separated by a diameter's interval.

*Legs* orange-yellow, the femora, genuæ, and tibiæ of the first and second pairs, especially the tibiæ, tinged with brown; femora of the first and second pairs coarsely granulose in front.

*Palpi* short, orange-yellow; cubital and radial joints very short, the latter slightly and obtusely produced on the inner side; digital joint rather small, pointed-oval; the palpal organs large, consisting of a large, roundish, prominent corneous lobe, with some small corneous projections connected with it.

*Falces* prominent in front near the base, and compressed near their extremity, rather paler coloured than the cephalothorax.

*Maxillæ* and *labium* similar to the cephalothorax in colour.

*Sternum* somewhat suffused with black.

*Abdomen*, on the upperside or shield, shining black-brown, clothed with short hairs; on the sides, which are rugulose, and underneath paler blackish-brown. Spinners dull pale yellowish brown.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

* Nom. propr.

## CLUBIONA, Latreille.

### **Clubiona excisa,** sp. n.

*Adult male*, length 2 lines.

In form, colour, general structure, and appearance this spider is of the ordinary European type, but differs in the structure of the palpi and palpal organs, as well as in other points.

The *cephalothorax* is dull orange-yellow, clothed with pale pubescence. Caput broad and almost squarely truncated in front.

The *eyes* occupy almost the whole width of the caput. Those of the hind-central pair are much further apart than from the hind-laterals; the fore-centrals are nearer together than to the fore-laterals.

The *legs* are moderate in length and strength; yellow in colour, with pale hairs; spines normal.

*Palpi* moderately long. Radial and digital joints very short; the radial strongest, and with a bifid apophysis at its extremity on the outer side—the anterior portion about the length of the joint, strong, a little tapering, and obtuse at its extremity, the posterior portion larger and of a somewhat detached appearance, narrowest and truncate at its extremity, which is a little in advance of the extremity of the other portion. Digital joint of tolerable size, obtuse-oval. Palpal organs prominent and well developed, with a strong spine issuing from their base and running round the outer margin and round beneath their extremity; the cubital joint has a short, strongish, tapering, obtuse-ending apophysis at its extremity near the inner side; the humeral joint has near its fore-extremity about two spines in a transverse line, and a single one a little way within them.

*Falces* rather long, strong, projecting forwards, a little divergent at their extremity, and greatly excavated on their inner sides, with one or two small teeth on the margin.

*Maxillæ* and *labium* normal; colour yellow-brown.

*Sternum* yellow, oval, obtusely pointed at its hinder extremity.

*Abdomen* elongate-oval, yellowish, clothed with pale greyish hairs; spinners normal.

*Hab.* Mexico, Orizaba (*H. H. Smith*).

## PROSTHESIMA, L. Koch.

### **Prosthesima moesta,** sp. n.

*Adult female*, length very nearly $3\frac{1}{2}$ lines.

This spider is nearly allied to the European form *Prosthesima petiverii* (Scop.). The whole of the fore part is deep black-brown to dark yellow-brown, excepting the tarsi of the legs, which are dull reddish-yellow-brown. The general structure is normal. The *eyes* are in the usual position; those of the posterior row are very nearly in a straight line; the hind-centrals are oval, oblique, and distinctly nearer together than to the hind-laterals; the fore-centrals are near together, separated by rather less than a diameter's interval, seated on each side of a tuberculiform prominence, and near below them on each side are the fore-laterals, oblique, and largest of the eight. The four centrals form a trapezoid much longer than broad. Numerous long spiniform bristles project forwards from the front of the falces, and there are some strongish spines on the radial and digital joints of the palpi. The *abdomen* is black, hairy; the inferior pair of spinners much the longest and strongest; the genital aperture large, and of very characteristic form.

*Adult male*, length 3 lines, resembles the female in colours and other general characters. The palpus has the apophysis at the fore extremity on the outer side of the radial joint long, tapering, and a little curved upwards. The palpal organs are tolerably compact but complex. These parts bear a close resemblance to those of *P. petiverii* (Scop.), but the radial apophysis is slenderer, and the palpal organs appear to differ a little in structure.

*Hab.* Mexico, Amula in Guerrero (*H. H. Smith*).

## EPEIRA, Walckenaer.

### **Epeira merens,** sp. n.

*Adult female*, length very nearly 6 lines.

*Cephalothorax* much longer than broad; caput somewhat produced and squarely truncated in front; lateral marginal impressions moderate; normal indentations strong; profile rather flattened. It is brownish-yellow in colour, covered with greyish hairs, and with a broad, longitudinal, central, dark brown band, somewhat angulated on the edges and broadest near the occiput; on the thorax are some indistinct converging brown stripes.

*Eyes* in normal position, three groups on prominences at the fore margin of the caput and occupying its whole width. The central group of four eyes forming a trapezoid broader than long, with its anterior side much longer than its posterior side: the anterior eyes of this group are largest of the eight, seated on each side of an obtusely-pointed projection of the central prominence, and separated from each other by less than a diameter's interval; the interval between the posterior pair is equal to a diameter. The eyes of each lateral pair are divided by an interval equal to the diameter of the fore-lateral eye. Height of clypeus equal to a diameter of one of the fore-central eyes.

*Legs* moderately long, strong, 1, 2, 4, 3, furnished with hairs and numerous strong spines. Colour yellowish, femora orange; annulated (excepting the femora of the first pair at their extremity) distinctly and tolerably thickly with deep brown.

*Falces* powerful, vertical, subconical.

*Maxillæ* short, broad, dark yellow-brown; margin broadly whitish.

*Labium* broader than high, rather pointed at the apex, which is white.

*Sternum* subtriangular, with prominences opposite the coxal joints of the legs. Colour deep brown, with a strong dumb-bell-shaped yellow spot (or two ordinary spots coalescing) on each side of the margin on the fore half, followed backwards by a single spot of the same colour.

*Abdomen* large, subtriangular, furnished with a few hairs; on each side near the fore margin is a strong conical eminence, each followed by two much smaller tubercular prominences in a longitudinal line at the middle of the outer margin; at the upper hinder extremity is a group of five different-sized subconical eminences, three in a transverse line, with another in the middle in advance of the line, the fifth behind it forming a four-cornered or diamond-shaped area; between the hinder eminences and the spinners the abdomen is strongly and transversely rugulose. The whole of the upperside and sides are of a deep bistre-brown colour mixed with yellowish points; a slender but very distinct transverse yellow line, slightly curved in the middle and broken near each end, runs from apex to apex of the two anterior conical prominences; the anterior edge of this line is furnished with a narrow fringe of short, rather shining, white hairs. The two eminences on each side are yellow, and between them on the middle of the upperside are two broken yellow-margined black lines or spots, one on each side converging towards the posterior group of prominences, and representing the normal Epeirid abdominal frondose pattern. Spinners short, compact, black-brown, with a short, yellow, curved bar on each side towards the front. Underside brown, with two median yellow spots in a transverse line just behind the genital process, followed by two others much smaller and indistinct, but also in a transverse line. Genital process strong, bent, and of characteristically distinct form.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## METAGONIA, Simon.

### **Metagonia caudata.**

*Metagonia caudata,* Cambr. anteà, p. 150, t. 21. figg. 8, 8 *a–d*.

The female only of this spider was described (*l. c. suprà*). The *adult male* measures $1\frac{1}{2}$ lines in length. In general colours and appearance this sex closely resembles the female. The caput, however, has a broad yellow-brownish longitudinal central band, including the eyes and narrowing to the thoracic indentation;

also on either side of the upper part of the abdomen towards the caudal prolongation is a large dull blackish patch.

The *palpi* are large, and the palpal organs excessively developed; the figures alone can give any correct idea of them.

The *falces* have, on the inner side above near the fore extremity, a prominence armed with several minute denticulations.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

"Found on the lower side of a large leaf about seven feet from the ground in a damp, shady, cacao-orchard. No web of any kind, but sitting with legs stretched out and body pressed close to the leaf. No vibration of the body when alarmed; runs swiftly."

The female described was from the same locality.

## PRUSIAS, Cambridge.

### Prusias nugalis.

*Prusias nugalis*, Cambr. anteà, p. 102, t. 13. figg. 9, 9 *a–d*.

An immature male only of this spider was described and recorded (*l. c. suprà*). I have since come across an adult female of it in Mr. H. H. Smith's Mexican collection. As this example is not only adult, but in much better condition than the immature male already described, it is worth while adding here a description of it, or rather to note its differences from that example:—

*Adult female*, length $5\frac{1}{2}$ lines.

In general colour and appearance very similar to the immature male, but the legs all furnished pretty thickly with very long slender hairs, as well as long and slender spines (the hairs on the male had, no doubt, been rubbed off). The abdomen also is clothed, but not thickly, with rather long hairs. The large cruciform marking on the upperside of the male abdomen is reduced in the female now described to a narrow, elongate, fusiform, yellowish marking on the anterior half, running through a rectangle of four dark spots rimmed with yellow; the fusiform marking is followed towards the spinners by several slender angular yellow lines or chevrons, decreasing in length and their extremities forming so many small spots; through the vertices of the chevrons there runs a blackish line or narrow stripe, ending in a small tuft or pencil of black hairs at the extremity of the anal prominence. The genital aperture is conspicuous and of characteristic form.

The digital joint of the palpus is rather long and furnished at the end with a kind of scopuliform tuft of hairs. The terminal claw is very small, strongly bent, and appears to have a tooth or prominence at its base.

*Hab.* Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

## CYCLOSA, Menge.

### Cyclosa furcata, sp. n.

*Adult female*, length slightly over 5 lines.

*Cephalothorax* much longer than broad; lateral marginal impressions moderate; normal indentations strong, especially the lateral ones at the junction of the caput and thorax and the central thoracic indentation. It is dull pale yellowish in colour, clothed with white pubescence; on the sides of the caput, and on the occiput, there are blackish markings, and an irregular, somewhat tapering, curved, longitudinal, blackish

band on each side of the thorax, as well as some broken black markings along the middle at the thoracic indentation.

*Eyes* in normal position, on black spots, and occupying the whole width of the fore extremity of the caput; the posterior row has its slight convexity directed backwards, that of the anterior row has its convexity strong and directed forwards; the eyes of the hind-central pair are separated by less than a diameter's interval, those of the fore-central pair by a diameter. The four central eyes form a trapezoid, whose length is rather greater than its width, and its fore side longer than its hinder one; the fore-central eyes are seated on a prolongation or prominence of the middle of the caput. The height of the clypeus is less than half that of the facial space.

*Legs* rather short, tolerably strong, 1, 2, 4, 3, furnished with hairs and a few slender spines. Colour like that of the cephalothorax, annulated or marked more or less distinctly with yellow-brown.

*Falces* tolerably strong, vertical, yellowish, with a conspicuous black patch in front.

*Maxillæ* dull yellowish-brown.

*Labium* black, the apex whitish-yellow.

*Sternum* longer than broad, the anterior extremity broadly truncated; somewhat subtriangular, with prominences opposite the insertion of the legs. Colour black, the anterior margin irregularly yellowish.

*Abdomen* large, projecting over the thorax, its hinder part prolonged in a caudal form and rather widest at its posterior extremity, which is cleft or furcate. The colour is dull whitish, with a longitudinal dusky band on the upperside occupying nearly its whole width and length, its margins angulated and bordered with a narrow dark brown and another whitish line. The underside is blackish, laterally margined with white, including the spinners, which are short, compact, and black, and placed distinctly nearer to the fore extremity of the abdomen than to the caudal furcation. The sides of the abdomen, as well as the underside of the caudal portion, are marked with irregular blackish lines. Genital process white, tapering, slightly directed backwards, and with a basal black ring.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

### **Cyclosa clara,** sp. n.

*Adult female*, length rather over 2 lines.

*Cephalothorax* very gibbous on each side of the thorax and also at the occiput, the normal oblique indentations being therefore very large and deep. Colour pale yellowish, the thorax broadly margined with black-brown, and the oblique indentations dividing the caput and thorax also of the same colour, and there are two black-brown spots near together in a transverse line at the occiput; some specimens vary in the depth and extent of these markings.

*Eyes* normal, on black spots; hind-centrals almost contiguous; fore-centrals largest, seated on a prominence of the caput, and separated by nearly an eye's diameter. The four central eyes form a trapezoid, whose anterior side is longer than the posterior.

*Legs* rather short, robust, 1, 2, 4, 3; furnished with hairs and a very few fine spines; colour pale yellow, irregularly annulated with blackish-brown; the anterior half of the femora of the first and second pairs is black, and a lesser portion at the same part of the third and fourth pairs is also black; the femora of the fourth pair have in fact a distinct broad black annulus at the fore extremity and another towards the hinder end; there is, however, some variety in this last respect in different examples.

*Palpi* yellow.

*Falces* strong, a little prominent in front; colour yellow.

*Maxillæ* and *labium* dull yellowish, dark at their bases.

*Sternum* subtriangular, yellowish-white, with strongish eminences opposite to the insertion of the legs.

*Abdomen* large, short, somewhat globular; very convex above, where there are three prominences—one on each side towards the fore extremity short and obtusely rounded, with a small semicorneous point directed backwards at the hinder part of the prominence (the prominence and its point looking like the head and short beak of a bird); the third prominence is near the hinder extremity of the abdomen, and forms an equilateral triangle with the other two—it is slightly longer than the others, less strong, and of a somewhat conical or tapering form. The third prominence is placed halfway between the anterior prominences and the spinners, and is much less in height than the distance from it to the spinners. The colour of the abdomen is

brownish-yellow marked with black; the pattern is rather obscure, but there is between the anterior prominences a somewhat cruciform yellow marking and a largish black patch on each side just in front of the posterior prominence; a yellowish line also runs from the base in front of this prominence to its extremity. The spinners are short, compact, with a more or less distinct zone of black spots (running into each other) round their base. The genital aperture and process are of a distinct and characteristic form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

This species is nearly allied to *Cyclosa index*, Cambr. (anteà, p. 51, t. 6. fig. 6), but differs in the larger size and form of the anterior abdominal prominences, and the much shorter posterior one, as well as in the markings of the legs and cephalothorax, and also in other points.

## BASSANIA*, gen. nov. (fam. Thomisidæ).

Closely allied to *Xysticus*, Koch, but of a broader flatter form, and entirely covered with short obtuse spines, many of those on the cephalothorax and some on the abdomen being enlarged towards the extremities. The fore-lateral eyes are larger, the tubercles on which these and the hind-laterals are placed are confluent and large; in other respects the eyes are similar to those of *Xysticus*.

The *legs* are short, strong; almost all the ordinary hairs and bristles are short and of a spinous nature; the normal spines beneath the metatarsi and tibiæ are strong, less obtuse than the rest, and placed as in *Xysticus*; three or four nearly equal teeth at the base of the terminal tarsal claws.

*Palpi* very spinose in front; the spines obtuse at the extremities.

*Abdomen* of rather more pointed form behind than in *Xysticus*, though still obtuse.

### **Bassania æmula,** sp. n.

*Adult female*, length very nearly 3 lines.

The whole spider is mottled with reddish-brown, brown, black, yellowish, and white; the white mottlings, however, indicating a central longitudinal band on the thorax as well as the normal transverse, angular, Thomisid bars on the abdomen.

The length and breadth of the cephalothorax are nearly about equal, as also are those of the abdomen.

The underside is paler than the upper.

The area of the four central eyes is distinctly broader than long; the hind-central eyes being considerably smaller than the fore-centrals. The eyes of the posterior row are about equally separated; and the interval between the fore-centrals is larger than that between each and the fore-lateral eye next to it.

*Hab.* Mexico, Orizaba (*H. H. Smith*).

## BONNA*, gen. nov. (fam. Drassidæ).

*Cephalothorax* much longer than broad, oval, lateral marginal impressions at caput slight, upper convexity moderate; normal indentations of caput and thorax very slight.

*Eyes* rather small, in two transverse rows, rather widely separated from each other, and nearly concentric; posterior row longest and most curved, the convexity of their curves directed forwards. The four centrals form an oblong, whose anterior side is rather the shortest. The interval between those of each lateral pair is equal to that between the hind-centrals, and is greater than that between the fore- and hind-central pairs. Height of clypeus less than half that of the facial space.

*Legs* moderately long, rather robust, not greatly differing in length, 4, 1, 2, 3; 1, 2, 3 very nearly equal. Spines few, chiefly on the tibiæ and metatarsi of the third and fourth pairs. Scopula beneath the tarsi and metatarsi of the first and second pairs, and also on the tarsi of the third pair. Spines beneath the

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* Nom. propr.

tibiæ of the first and second pairs two only in a longitudinal line on the anterior half, and beneath the metatarsi two only in a transverse line near the base.

*Falces* moderate in length and strength, conical, vertical.

*Palpi*. Terminal claw very minute.

*Maxillæ* straight, rather long, considerably widened at the extremity, and rather strongly, but broadly, impressed transversely.

*Labium* oblong, rather narrowed, and rounded at the apex.

*Sternum* much longer than broad, truncated transversely before, obtusely pointed behind. The coxæ of the fourth pair of legs almost meet at this point.

*Abdomen* oblong-oval; inferior spinners longer, stronger, and much wider apart than the superior spinners.

### **Bonna fidelis,** sp. n.

*Adult female*, length $3\frac{1}{2}$ lines.

*Cephalothorax* dull, pale yellowish-brown, the sides and a **V**-shaped marking just in front of the slight, narrow, thoracic indentation suffused with dusky brown, deepening into a narrow black marginal line.

*Eyes* of nearly uniform size; the interval between the fore-centrals is double that between each and the fore-lateral eye next to it; the interval between those of the hind row is equal.

*Legs* similar in colour to the cephalothorax.

*Palpi*, *falces*, and *maxillæ* similar to the legs in colour.

*Sternum* similar to the legs in colour, but much marked and suffused, excepting in the middle, with blackish.

*Abdomen* brownish-black; on the upperside the fore half or rather more is almost covered with a longitudinal, pale, dull yellowish, oblong marking, as broad as the abdomen in front, narrower behind, where, towards the end, there is a notch or indentation on each side, giving the hinder end a somewhat fish-tail form, the hind margin being also indented, and with a short longitudinal line from its centre connecting it with a series of transverse angular pale lines or chevrons; these decrease in vividness and become obsolete towards the spinners; the spinners are similar in colour to the cephalothorax. The underside is rather paler than the upper.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## BEDRIACUM *, gen. nov. (fam. Drassidæ; subfam. Clubioninæ).

*Cephalothorax* longer than broad; lateral marginal impressions moderate and near the anterior margin of the caput; moderately convex, rather highest at the thoracic indentation.

*Eyes* rather closely grouped together; the anterior row is shortest, and has its convexity directed forwards, the convexity of the posterior row directed backwards, the fore-centrals much the largest. The four central eyes form a square or very nearly so. The eyes of the posterior row are equally separated; those of each lateral pair contiguous to each other.

*Legs* long, 1, 2, 4, 3, or 1, 4, 2, 3 (2 and 4 scarcely different in length), not very robust, armed with longish, not very numerous spines, those on the metatarsi and tibiæ of the first and second pairs not confined to the underside of the joint. There are also numerous long, slender, prominent hairs on all the legs; tarsi furnished with an exceedingly thin scopula.

*Falces* rather long and projecting forwards.

*Maxillæ* similar to those of *Clubiona*, straight, but widened at the extremities.

*Labium* oblong, truncate at the apex; little more than half the length of the maxillæ.

*Sternum* oval, somewhat rounded at the fore-extremity.

*Spinners* rather long; those of the superior pair have the terminal joint as long as the basal, almost cylindrical, scarcely tapering.

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* Nom. propr.

## **Bedriacum prædator,** sp. n.

*Adult male*, length $4\frac{1}{2}$ lines.

*Cephalothorax* reddish-yellow-brown, clothed with short, somewhat pubescent grey hairs. Height of clypeus about equal to the diameter of the fore-central eyes.

*Legs* slightly paler than the cephalothorax.

*Palpi* moderately long, yellow. Humeral joint robust, rather strongly curved, somewhat clavate, with several not very strong spines on the fore half of the upperside. Cubital joint shorter than the radial, and also clavate. Radial joint slightly curved, furnished with numerous bristly hairs; at the anterior extremity on the outer side is a small apophysis, whose extremity is notched or somewhat bifid. Digital joint long, its base oval, whence it is drawn out in a long finger-like form, slightly tapering to an obtuse point; the drawn-out portion exceeds in length the basal part (beneath which the palpal organs are placed), and is divided longitudinally beneath by a long narrowing cleft, it also bends upwards from the basal part in a somewhat angular form. Palpal organs rather complex, well developed, with a small furciform black characteristic spine at their anterior extremity.

*Falces*, *maxillæ*, and *labium* similar in colour to the cephalothorax.

*Sternum* pale yellowish-brown, with a short dash of a darker hue opposite the insertion of each of the basal joints of the legs.

*Abdomen* subcylindric-oval, of a pale dull brownish hue, clothed with hairs, among which are some long, slender, prominent dark ones. Spinners similar in colour to the legs.

*Hab.* Mexico, Orizaba (*H. H. Smith*).

"In a small silken nest, in a crevice of a cement wall."

This spider is nearly allied to *Eutichurus* and *Strotarchus*, Sim.

### AMAMRA, Cambridge.

## **Amamra turrigera,** sp. n.

*Female* (not quite adult), length to spinners $2\frac{1}{2}$ lines; height from spinners to summit of elevation $2\frac{1}{2}$ lines.

*Cephalothorax* of normal form; colour brownish-yellow, broadly margined with black; a large dusky brown triangular marking at the occiput, whose anterior margin is jet-black; the clypeus and fore part of the ocular area are suffused with dark brown, and there are also some indistinct brown marks between the eyes and the dark triangle. The height of the clypeus is less than half that of the facial space.

*Eyes* in the normal three widely separated groups; the central group is in front of the central prominence, the quadrangle formed by them broader than long, and its anterior shorter the posterior side; the posterior eyes are largest.

*Legs* short, 1, 2, 4, 3. Colour dull yellowish, the fore half of the femora blackish, the genual joints brown, the metatarsi of the first and second pairs faintly annulated with brown. Spines neither numerous nor strong.

*Falces* strong, well rounded at the base in front, directed backwards; general colour yellow, but dark yellow-brown at their extremity near the fang.

*Maxillæ* and *labium* normal. Colour yellowish.

*Sternum* yellow, with brown somewhat dentate lateral margins.

*Abdomen* large, the anterior portion of the upperside produced into a high perpendicular elevation, whose upper extremity is wider than the middle, and divided into two somewhat subconical lobes by a deep longitudinal cleft; in front of and just below the cleft is a small obtuse prominence on each side, and a little below the base of the elevation is a longitudinal row of three smaller prominences; on the hinder part of the abdomen, halfway between the summit of the elevation and the spinners, is a longish, somewhat broken, triangular, blackish and brown marking, between which and the spinners is a longitudinal series of three pairs of minute deep brown points or linear spots. The rest of the abdomen is of a dull yellow-brownish hue, paler and yellowish-white on the sides. Underside dull blackish. The lobes at the summit of the elevation, as well as the prominence in front of them, have a few black bristles intermingled with the finer pubescence.

*Hab.* Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

## APOLLOPHANES *, gen. nov. (fam. Thomisidæ; subfam. Philodrominæ).

*Cephalothorax* as broad as long, or nearly so.

*Eyes* much as in *Thanatus*, those of the posterior row equally separated; area of the four centrals broader than long, and its fore side shorter than the hinder one.

*Legs* moderately long, 2, 1, 4, 3; 4 and 3 distinctly shorter than 2 and 1; armed with tolerably strong spines. Metatarsi distinctly shorter than the tibiæ. Scopula beneath the tarsi very thin; claw-tuft compact and tolerably strong.

*Labium* as broad at the base as high; apex somewhat roundish, pointed; no more than half the length of the maxillæ.

This genus is nearly allied to *Cleocnemis*, Sim., and *Suemus*, Sim.; but differs from both in the position of the eyes.

### Apollophanes punctipes.

*Tibellus punctipes*, Cambr. anteà, p. 79, t. 9. figg. 15, 15 *a–c*.

This species was originally described as a *Tibellus* from a single female specimen from Guatemala. A second example of the same sex, from Amula in Guerrero, Mexico (*H. H. Smith*), has since been received.

## TIBELLUS, Simon.

### Tibellus affinis, sp. n.

*Female* (not adult), length $2\frac{2}{3}$ lines.

This spider bears an exceedingly close resemblance to *T. oblongus*, Walck. (the well-known European form); it is, however, of a longer and more slender form.

The *cephalothorax* is yellow, with a central and marginal, very distinctly defined, longitudinal brown stripes, and between these on each side is an indistinct narrower one; all these stripes are closely punctured with minute black points.

*Eyes* normal.

*Legs* long, 2, 4, 1, 3, those of the third pair much the shortest, the rest do not differ greatly in length. They are of a pale yellow colour, speckled with minute black spots, and armed with longish spines; a thin scopula beneath the tarsi and a portion of the metatarsi, and a compact claw-tuft.

*Falces*, *maxillæ*, *labium*, and *sternum* pale yellowish.

*Abdomen* long, narrow, tapering, three times the length of the cephalothorax; colour whitish-yellow, with a central well-defined, slightly tapering, longitudinal brown stripe running from end to end, and an ill-defined one on each side, these stripes closely set with minute black points; a little way from the hinder extremity are two small black spots in a transverse line, one on each side between the central and lateral stripes; on the underside is a central longitudinal brown stripe similar to those on the upperside, and similarly speckled with black.

*Hab.* Mexico, Amula (*H. H. Smith*).

## LITHYPHANTES, Thorell.

### Lithyphantes clarus, sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

This spider is of normal form and structure.

*Cephalothorax* yellow-brown, with a deep brown arrow-head marking pointing backwards at the occiput, where there are some strong prominent bristly hairs, and some slight indistinct converging streaks on the sides.

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* Nom. propr.

*Eyes* on strong tubercular prominences, subequal; fore-centrals smallest, those of the posterior row in a straight transverse line. The central pair rather nearer to each other than each is to the lateral eye next to it. The interval between those of the lateral pairs distinct, but not great. The central quadrangle scarcely longer than broad, the fore side slightly shortest. Clypeus rather more than half the facial space in height, and roundly prominent at the fore margin.

*Legs* short, moderately strong, 1, 4, 2, 3, furnished with hairs only. Colour dull brownish-orange, the femora indistinctly clouded with dark brown, the fore extremity of the tibiæ similarly suffused.

*Falces* strong, darkish yellow-brown.

*Palpi* dull brownish-yellow.

*Maxillæ* dark yellow-brown.

*Labium* black-brown, broader than high, nearly semicircular.

*Sternum* black-brown, truncated in a hollow or incurved line at its fore-margin, a little longer than broad, rather obtusely pointed behind.

*Abdomen* short-oval, very convex above, rounded at the fore end and obtusely pointed behind, thinly clothed with somewhat bristly hairs, the surface slightly coriaceous. Colour jet-black, with a white line round the fore margin, each end extending a third or more backwards along the side; behind this are two small linear white spots in a transverse line, following which, near the middle of the abdomen, is a transverse line extending a little over the sides, and formed by three united curved lines, the middle part strongest; a little way behind this are two more small transverse linear white spots; next, again, is a transverse slightly curved white line, followed towards the spinners by a minute white spot in the central median line. Just behind and a little above each spiracular opening is a short white dash or elongate spot, and close behind the genital aperture is a slightly curved transverse white line. The genital aperture appears to consist of a simple transverse slit or opening. Spinners short, compact, yellowish-brown.

*Hab.* Mexico, Patzcuaro (*H. H. Smith*).

## THERIDION, Walckenaer.

### **Theridion hispidum,** sp. n.

*Adult male,* length 1 line.

General form normal. Caput and thorax looked at in profile on a level, the former sloping forwards a little in the ocular area, which projects at the fore-central eyes. The height of the clypeus, which is abruptly impressed at the upperside and perpendicular below, exceeds in height half that of the facial space. The cephalothorax is yellow in colour, with a longitudinal central suffused wedge-shaped blackish band, including the hinder row of eyes, and running to the thoracic indentation; some strong hairs in the medial line and on the ocular area.

*Eyes* of posterior row almost in a straight line, and nearly equal in size, and equally separated by rather less than an eye's diameter. The four centrals form a square, whose anterior eyes are smaller than the posterior.

*Legs* rather long, slender, 1, 2, 4, 3, yellow in colour; the femora of the first pair yellow-brown, furnished with long and some coarse hairs; a few erect bristles on the tibiæ, those on the fourth pair almost spines.

*Palpi* short, similar in colour to the legs, excepting the digital joint, which is yellow-brown, large, and of a roundish-oval form; the radial joint is somewhat produced or spreading in front; the palpal organs are well developed, rather complex, directed outwards, and encircled round the margin by a long, pretty closely fitting, black, filiform spine which issues from near their fore-extremity.

*Falces*, *maxillæ*, and *labium* yellow.

*Sternum* subtriangular, very convex, yellow, slightly tinged with dusky, and clothed with prominent hairs.

*Abdomen* short-oval, of a dull luteous colour, the anterior part of the upperside and the sides pretty thickly speckled with white; a large, somewhat quadrate, tolerably well-defined white patch near the hinder part of the upperside, and from each of the two posterior angles of this patch a diffused black line runs to the spinners, the space between the black lines being more distinctly and thickly spotted with white; the upperside of the abdomen is clothed, but not thickly, with long, prominent, coarse hairs. There is

evidently some variation in the abdominal markings of this species. I have, since describing the above, come across another example in which the large white patch is scarcely defined, but in front of it is a large black one.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## **Theridion rotundum,** sp. n.

*Adult female*, length 2 lines.

This spider is of the *Theridion denticulatum*, Walck., group.

*Cephalothorax* inversely heart-shaped, ending before in a rather drawn-out or an obtusely rounded form; lateral marginal impressions slight, the whole length not greatly exceeding the width of the widest part at the thoracic junction; the posterior margin very hollow, truncate. The clypeus is prominent on the lower margin, and its height exceeds half that of the facial space. Colour yellow-brown, suffused or finely marked, mostly on the sides, with dark brown, and the normal converging grooves indicated by indistinct darker yellow-brown lines.

*Eyes* in two transverse rows not greatly different in length, and occupying the whole of the width of the caput; posterior row not greatly curved, the convexity of the curve directed backwards. The anterior row does not extend so widely as the posterior row, and so might be taken to be the shortest; but as it is much more strongly curved in an opposite direction, it is probably the longest; when, however, looked at sideways, the curves are equal. The eyes of the posterior row are equidistant from each other, though perhaps the centrals may be slightly further from each other than from the laterals. The fore-centrals are considerably further from each other than from the fore-laterals, and are seated on an obtuse prominence of the caput; those of each lateral pair are seated on a strongish tubercle, and slightly obliquely. The fore-centrals are largest of the eight. The central quadrangle is narrower behind than in front, and the anterior side is longer than the length of the quadrangle.

*Legs* short, brownish-yellow, 1, 2, 4, 3, indistinctly annulated with yellow-brown, furnished with hairs only.

*Falces*, *maxillæ*, and *labium* similar to the cephalothorax in colour.

*Sternum* longer than broad, its hinder extremity obtusely pointed; colour yellow-brown, suffused with blackish, mostly towards the margins and hinder extremity.

*Abdomen* large, globular, thickly covered with almost coalescing white irregular spots; with a tapering, not very distinctly outlined, brownish-yellow, central median dentated band, with an indistinct whitish margin; on this band, which reaches to the spinners, are the normal dusky brown lines along the region of the dorsal vessel, and on the sides are several indistinct oblique yellow-brownish stripes. The spinners are short, compact, and placed on a black patch, and between them and the genital aperture (which is of a simple transverse-oval form) is a largish white spot.

*Hab.* MEXICO, Patzcuaro (*H. H. Smith*).

## **Theridion morulum,** sp. n.

*Adult female*, length $1\frac{3}{4}$ lines.

*Cephalothorax* of ordinary form, of a dull orange-yellow colour, narrowly margined with dark brown, a short longitudinal central dark brown bar on the caput.

*Eyes* of tolerable and nearly equal size; in two transverse rows of almost equal length, and very nearly equally curved, though in opposite directions, the convexity of the anterior row being directed forwards, that of the posterior row backwards. The interval between the hind-central pair is equal to a diameter, and these are distinctly nearer together than to the hind-laterals, while that between the fore-centrals is a little greater than between each and the fore-lateral eye next to it. The four centrals form a square; those of each lateral pair are contiguous and placed slightly obliquely on a not very strong tubercle. The height of the clypeus exceeds half that of the facial space, and its lower margin is prominent.

*Legs* rather short and slender, 1, 4, 2, 3. Similar in colour to the cephalothorax and sparsely annulated with dark yellow-brown, furnished with hairs and a few slender erect bristles.

*Falces* rather long, not very strong, similar to the cephalothorax in colour.

*Maxillæ* and *labium* yellow-brown.

*Sternum* slightly longer than broad, subtriangular, obtusely rounded at the hinder extremity, and of a dark yellow-brown colour.

*Abdomen* large, very convex, almost globular above and projecting over the base of the cephalothorax, broadest towards the fore part, and obtusely pointed at the spinners. Colour jet-black, with some pale white-spotted markings along the central median line, indicating a broken denticulate band or stripe, the foremost of these markings (in one example) having a distinct cruciform shape, and on the sides are three short, oblique, pale narrow stripes, with some longer oblique fine lines forwards; sides (towards the underside, especially in front) whitish or marked with blackish; a belt round the spinners jet-black, edged outside with white; underside in the middle blackish; genital prominence and process red-brown and of characteristically distinct form.

*Hab.* MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

## **Theridion albulum,** sp. n.

*Adult female*, length slightly less than 1 line.

*Cephalothorax* nearly as broad as long, broadest across the thoracic indentation; lateral marginal impression at the caput scarcely any; fore extremity obtuse; the profile forms a slight curve. Colour light yellow-brown, with the normal indentations of a dusky brown hue. Clypeus a little prominent below, and less than half the height of the facial space.

*Eyes* rather large, subequal; those of the posterior row in a straight transverse line, the central pair rather nearer to each other than to the laterals, the interval being less than a diameter. The central quadrangle is rather longer than broad, and its anterior is longer than its posterior side; the fore-centrals are seated on a prominence, as also are each of the lateral pairs; the fore-centrals are almost contiguous to the fore-laterals; the anterior row is rather strongly curved, the convexity of the curve directed forwards.

*Legs* not very long, 1, 2, 4, 3, slender. They are of a pale dull yellow colour, annulated with yellow-brown, and furnished with coarse hairs, slender bristles, and a distinct spine or two on the tibiæ; on the inner side of the genuæ of the fourth pair is a rather distinct prominence furnished with a short spine.

*Falces* and *maxillæ* yellow-brown; the latter are rather long and strong, greatly inclined towards the labium and somewhat pointed at their extremity.

*Labium* much broader than high, rounded at the apex; colour yellow-brown, slightly suffused with sooty-brown.

*Sternum* a little longer than broad, yellow-brown, suffused with sooty-brown; its form is heart-shaped or subtriangular, its posterior extremity very obtusely pointed. The interval between the coxæ of the fourth pair of legs is equal to the width of the coxa.

*Abdomen* almost globular; colour dull luteous-brown, much darker on the sides and underside, thinly mottled above with obscure darker spots and white points; two curved white bars, meeting at the middle of the fore extremity, form a border to the fore side, and an agglomeration of the white spots forms an irregular broken median longitudinal band on the upperside, and ends in a large white spot above the spinners. The upper surface is thinly furnished with long, strongish, prominent, somewhat spine-like bristles, each issuing from a minute tubercle. The sides are rather thickly spotted with white points, forming a largish wedge-shaped white patch; and on the middle of the underside is a vivid white elongate spot of sugar-loaf form. The genital aperture is small and of a transverse oval shape.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Theridion niveum,** sp. n.

*Adult female*, length rather over $1\frac{1}{2}$ lines.

*Cephalothorax*, *falces*, *legs*, *maxillæ*, *labium*, and *sternum* clear pale yellow; a narrow longitudinal tapering stripe of black bisects the thorax and the occiput, where, close behind the hind-central eyes, it ends in a fine point. The height of the clypeus is equal to half that of the facial space.

The *eyes* are small, subequal, and in two equally curved transverse rows, the anterior a little the shortest, the convexity of the anterior row directed forwards, that of the posterior row backwards; the eyes of the posterior row are equally separated; in the anterior row the centrals are further from each other than

from the laterals. The central quadrangle forms a square. The fore-centrals are black, all the rest pearly-white.

*Legs* moderately long, very slender, 1, 4, 2, 3; pale yellow, the extremities (and sometimes the middle) of the joints marked with a small blackish spot; in some examples these spots are, many of them, obsolete.

*Abdomen* large, globular, upper part and sides snowy-white, with some indistinct very fine dark lines faintly indicating (in some specimens) a longitudinal central dentated band and oblique lines on the sides; underside dull luteous-yellowish-white. Genital aperture small, deep red-brown, and characteristic in form.

*Hab.* PANAMA, Bugaba (*Champion*).

## Theridion trepidum, sp. n.

*Adult female*, length $1\frac{1}{2}$ lines.

*Cephalothorax* of ordinary form; its colour, as well as that of the falces, maxillæ, labium, sternum, legs, and palpi, is pale yellow; that of the cephalothorax, perhaps, rather brighter yellow than the rest, and with a central longitudinal furcate black line, the points of the fork reaching to the occiput.

*Eyes* small; excepting the fore-centrals, they are seated on black spots and pearly-white, forming two curved transverse rows, the anterior row a little the shortest, and the convexity of the curves directed in opposite directions—that of the posterior is strongest and backwards, that of the anterior forwards. The eyes of the posterior row are nearly equally separated, the centrals being a little nearer to each other than to the laterals; the central quadrangle forms almost a square, but its posterior side is rather longer than the anterior. The height of the clypeus exceeds half that of the facial space.

*Legs* long, 1, 2, 4, 3?, slender, furnished with long, pale, coarse hairs.

*Falces* long, straight, moderately strong.

*Palpi* rather long; a long curved tapering bristle or slender spine at the fore side of each of the cubital and radial joints.

*Maxillæ* tolerably strong, inclined towards the labium, somewhat obliquely truncate at the extremity, where they are pointed on the inner side.

*Labium* much broader than long, the apex rounded.

*Sternum* subtriangular, obtuse at the hinder extremity, where it bends over towards the thorax.

*Abdomen* nearly globular, highest behind; colour white above and halfway over the sides; two opposed longitudinal curved sooty-blackish bands, somewhat indented on the margins, on each side of the upper-side reaching to the beginning of the posterior slope, where their ends approach but do not quite touch; the space between them forms a broad, bluntly dentated or frondose central band, and has a central longitudinal and branch lines on it, the black bands are also marked with a few minute white points. The lower part of the sides and underside are dull yellow-brown. The genital aperture is small, but of characteristic form.

*Hab.* GUATEMALA, Montaña de Chilasco (*Sarg*).

## Theridion transversum, sp. n.

*Adult female*, length very nearly 2 lines. *Adult male*, length $1\frac{1}{2}$ lines.

This spider (which belongs to the group of which *Theridion denticulatum*, Walck., may be taken to be the type) is of the ordinary form.

The *cephalothorax* (♀) is dark brown. The *clypeus* rather exceeds in height half that of the facial space, and its lower side is very prominent, or obtusely thrust forward over the base of the falces.

*Legs* yellow, annulated or marked, but not very regularly, with dark reddish-brown, 1, 2, 4, 3, those of the first pair considerably the longest. They are furnished with coarse hairs.

*Falces* yellow-brown.

*Maxillæ*, *labium*, and *sternum* dark yellow-brown, the latter darkest.

*Abdomen* large, very convex above, almost globular. Upperside blackish, mixed and speckled with white; a longitudinal, central, tapering band, dentated past the middle, and indicated by two converging white zigzag marginal lines, runs to the spinners. This band tapers, from the highest part of the abdomen,

both ways; at this highest part there is a very distinct and characteristic transverse line cutting the central band in two, and running a little way down on each side. The sides are white, with several not very strongly defined vertical stripes. Underside dark brown, with a roundish or somewhat oval whitish patch a little in front of the spinners, which are brown, compact, and on a blackish truncated cone-shaped prominence.

The *eyes* are subequal, the fore-centrals rather the largest, the two transverse rows almost equally curved in opposite directions; the interval between the central pair of the hinder row is a little less than that between each and the lateral eye next to it; the fore-centrals are placed on a strongish prominence, and form a line longer that the hind-centrals. The four centrals form nearly a square (slightly longer than broad), whose posterior side is less in length than the other three.

The *male* resembles the female very nearly in colours and markings; but the femora of the first and second pairs of legs are much suffused towards their extremities with reddish-brown. The palpi are yellow; the radial joint is stronger than the cubital, but of the same length; the digital joint is of moderate size, oval; the palpal organs are moderately complex, at the middle of their outer side is a circular lobe, from the lower side of which a long tapering spine issues and coils round underneath to their extremity and so backwards round the outer edge of the digital joint, and then underneath in a large circular free coil, the hair-like extremity of the spine projecting beyond the extremity of the digital joint. The abdomen is rather prominent near the middle of the underside, including the spiracular plates.

*Hab.* MEXICO, Mexico city (*H. H. Smith*).

Among weeds in the Aztec Canal.

## ARIAMNES, Thorell.

### **Ariamnes procera,** sp. n.

*Adult female*, length to spinners $1\frac{1}{2}$ lines; height of abdomen from spinners to extremities $3\frac{1}{2}$ lines; length of cephalothorax $\frac{3}{4}$ of a line.

*Cephalothorax* of oblong form. Ocular region elevated and prominent; fore part of the thorax strongly gibbous in the middle; thoracic indentation strong. Clypeus very prominent at the lower part. Colour pale yellow-brown, marked with a blackish marginal line, and converging blackish lines and striæ, and a broad black-brown band from each of the fore-central eyes to the falces.

*Eyes* of posterior row in a slightly curved line, the convexity of the curve directed backwards. The interval between the hind-central pair nearly two diameters. Laterals near together but not contiguous, and of an irregular somewhat triangular shape. The central quadrangle is nearly a square, the anterior side longer than the posterior. The fore-centrals are largest; the fore-laterals are placed close behind them, but not contiguous; the interval between the fore-centrals rather exceeds a diameter. The height of the clypeus considerably exceeds half that of the facial space.

*Falces* long, projecting; yellow-brown, suffused in front with blackish.

*Maxillæ* long, strong, straight, in profile projecting beyond the falces, rather roundly truncate at their extremity; colour yellow-brown, suffused with blackish-brown on their outer side.

*Labium* much broader than long, almost as broad as the fore-end of the sternum; colour yellow-brown, strongly suffused with black-brown.

*Sternum* long, rather narrow, slightly broadest near the middle, whence it tapers gradually, and its posterior extremity is drawn out between and behind the coxæ of the fourth pair of legs, where it slightly widens; colour like that of the labium.

The *legs* and *palpi* were all absent, but the coxæ of the fourth pair of legs were much the strongest.

*Abdomen* large, and drawn out to a great height above, in a tapering form, ending in a not very sharp point; its colour is yellow-brown, thickly covered with dull golden metallic spots; the upper (or anterior) side is bisected longitudinally throughout its length with a tapering black-brown streak, which becomes a fine line along most of its length; near the middle are two blackish spots almost contiguous in a transverse

line, and at the lower part of the sides are several other ill-defined blackish markings. The sides are rather paler than the upperside. Genital aperture behind a strongish prominence and of characteristic form.

*Hab.* PANAMA, Bugaba (*Champion*).

## ARGYRODES, Simon.

### **Argyrodes furcata,** sp. n.

*Adult female*, length to spinners 1 line, to extremity of abdomen from spinners 1⅓ lines.

This spider is of normal form and general appearance.

*Cephalothorax* of a broad oblong-oval form, drawn out in front into a projecting clypeus (which exceeds in extent half the facial space), the hinder extremity broad and truncate. Ocular area elevated. Colour dull greenish-yellow-brown, obscurely marked and clouded with blackish.

*Eyes* about equal in size, those of the posterior row in a straight transverse line, the two centrals considerably further apart than from the laterals of the same row. The central quadrangle is very nearly a square, the anterior side slightly longer than the posterior. Laterals on tubercles and contiguous to each other, and forming a line which lies at right angles to the posterior row, each fore-lateral less than half a diameter from the fore-central on its side. The eyes of the lateral pairs and hind-centrals pearly-white, the fore-centrals dark.

*Legs* tolerably long, slender, 1, 4, 2, 3, furnished with hairs only; colour greenish-yellow-brown, slightly clouded with blackish at the fore extremities of the joints.

*Falces*, *maxillæ*, *labium*, and *sternum* similar in colour to the legs; the sternum has a few prominent bristles on its surface issuing from minute tubercles.

*Abdomen* oval, with its hinder part greatly produced into a long caudate shape, cleft in a fish-tail form at its extremity; it is of a dark brown colour, thickly covered with nearly coalescing silvery-white spots and markings, leaving a longitudinal central brown stripe on the upperside, whose extremity is drawn out into a fine line at the furcate end of the abdomen; a little in front of this are two oblique indistinct brown lines converging near the fork, and the sides of the produced part of the abdomen are marked by a broadish but rather indefinite curved brown bar. The spinners are rather further from the hinder extremity of the abdomen and its fore end on the upperside. Genital aperture and process small, dark reddish-brown, of characteristic form, and placed behind a largish, convex, semicircular prominence.

*Hab.* MEXICO, Omilteme in Guerrero 9500 feet (*H. H. Smith*).

### **Argyrodes maculosa,** sp. n.

*Adult female*, length 1 line.

*Cephalothorax* of somewhat oblong-oval form, broadest and truncate behind, rounded in front. Caput rather prominent at the fore extremity. Clypeus prominent and rounded below, its height exceeding half that of the facial space. Colour deep brown.

*Eyes* in the usual position. The four centrals form a large square, the anterior pair largest of the eight. Those of each lateral pair very nearly contiguous to each other, and placed obliquely, the anterior one in a straight line with the fore-central pair; the hind-centrals are much further from each other than from the hind-laterals, and the fore-centrals also are much further from each other than from the fore-laterals.

*Legs* moderately long, slender, 1, 2, 4, 3. Colour yellow, annulated with dark brown.

*Falces* strong, yellow-brown.

*Maxillæ*, *labium*, and *sternum* dark brown.

*Abdomen* nearly globular, with three prominences of about equal length and strength—one on each side towards the hinder extremity, of a conical form; the third a little nearer to the spinners, more cylindrical, and bifid at its termination. The upperside and posterior slope are black, marked with silvery pearl-like spots, those in front of each of the conical prominences forming a somewhat transverse curved line, whose inner extremities unite in an angle between the prominences. Some larger spots surround the base of the bifid prominences; from the outer end of the curved line on each side is another line of spots running forwards and nearly meeting in an angle at the middle of the fore extremity. The sides are of a

dull brownish hue speckled with whitish points, and the middle of the underside is marked with larger silvery spots on a black ground. The genital aperture and processes are characteristic, of a deep blackish-brown, and, with the spiracular plates, are comprised in a quadrate area surrounded with a pale dull whitish margin.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## Argyrodes aurea.

*Argyrodes aurea,* Camb. anteà, p. 207, t. 26. figg. 1, 1 *a–c*.

The female only of this species was described and figured (*vide l. c. suprà*).

*Adult male*, length to extremity of abdomen slightly over 1 line, to spinners $\frac{3}{4}$ of a line.

*Cephalothorax* of normal form, colour dark yellow-brown. The height of the clypeus exceeds half that of the facial space; it is strongly indented just below the fore-central eyes, and the lower part projects in a prominent obtuse beak-like form over the base of the falces.

*Eyes* differing from those of the female slightly, the central quadrangle forming a square.

*Legs* 1, 2, 4, 3, those of the first and second pairs long, and much stronger than the rest, colour reddish-yellow-brown; the tarsi and metatarsi of the first and second pairs yellowish, the latter suffused with brownish at the anterior extremity; the third and fourth pairs have half or more of the femora at the hinder end yellow, the rest yellowish-brown, the genuæ brown; the tibiæ and metatarsi of the third pair brown, with an annulus of yellowish at the hinder extremity of the metatarsi; the fore half of the tibiæ of the fourth pair is brown, the metatarsi and tarsi brownish-yellow.

*Palpi* short, brownish-yellow, deepening to dark yellow-brown on the digital joint; cubital joint bent, clavate; radial joint produced at its extremity on the outer side. Digital joints oval, of moderate size, their outer sides facing inwards. Palpal organs simple, consisting chiefly of a large, convex, roundish-oval, corneous lobe.

*Falces* long, strong, straight, and projecting forwards; colour like that of the cephalothorax.

*Maxillæ* and *labium* normal, the former dark yellow-brown, the latter black-brown.

*Sternum* subtriangular, convex, the posterior extremity produced between the coxæ of the fourth pair of legs, and eminences opposite the insertion of the legs. Colour shining black-brown.

*Abdomen* short-oval, elevated and produced behind; a short, obtuse, subconical, central prominence about the middle of the hinder part, and a little in front of this on each side the abdomen is also slightly prominent. The colour of the abdomen is yellow-brown, pretty thickly covered with silvery-metallic spots, which are placed (on the upperside) chiefly on each side of the median line, leaving a dark blackish-brown space between, broadest in front, narrow behind; the hinder extremity of the abdomen is marked on each side with a black spot, close in front of which is an intensely bright silver one, also a little way above the spinners are two round intensely brilliant silver spots in a transverse line, margined above with black. The region of the sexual opening is rather prominent and shining dark blackish-brown. Spinners placed in a somewhat socket-like subconical prominence.

Although not possessing the golden tinge of the female (described *l. c. suprà*), I think this spider is of the same species.

*Hab.* GUATEMALA (*Sarg*).

## Argyrodes linguata, sp. n.

*Adult male*, length $1\frac{1}{3}$ lines.

*Cephalothorax* of ordinary general form, colour dull yellow-brown, marked with darker lines and striæ; the form of the clypeus (which greatly exceeds in height half that of the facial space) is very characteristic. The whole clypeus forms a large circular prominence, beginning immediately below the eyes; a little way below them is a strong deep transverse indentation or excavation, oval at each end, and with a somewhat rounded, obtuse, lip-like projection at the middle of the upper edge furnished with coarse hairs; from beneath this extends a kind of tongue-like process over the lower edge (or lip) of the excavation, and thence the clypeus projects roundly and very prominently over the base of the falces.

*Eyes.* The posterior row is curved slightly, the convexity of the curve directed backwards; the anterior row, if looked at on a level from the front, has its convexity directed upwards, but when seen in profile it is directed strongly forwards. The central eyes of the posterior row are distinctly further from each other than from the laterals; the four central eyes form a square, whose anterior side is shortest.

*Legs* long, slender, 1, 2, 4, 3. Colour dull pale greenish-yellow-brown, tinged with a deeper hue at the joints.

*Falces* long, tolerably strong, divergent, similar in colour to the cephalothorax.

*Palpi* moderately long; cubital joint very claviform, longer and stronger than the radial, and longitudinally indented or channelled behind; the radial joint is obtusely produced at its extremity on the outer side; digital joint large-oval, obtuse at its fore extremity; palpal organs compact, well developed, and with a strongish, oblique, closely fitting, dark red-brown spine near the middle.

*Maxillæ* normal, rather darker in colour than the cephalothorax.

*Labium* and *sternum* normal and of a dark brown hue.

*Abdomen* too much crushed and injured to trace the pattern, but its form appeared to be oval, tolerably convex above and projecting backwards over the spinners, but whether with or without eminences could not be ascertained. Its colour seemed to be of a sooty-brown, marked with black in places, and there were various lines and patches of silvery-metallic spots visible.

*Hab.* GUATEMALA, Santa Ana (*Sarg*).

This spider is possibly the male of *A. subdola*, Cambr.

## **Argyrodes subdola,** sp. n.

*Adult female*, length to upper extremity of abdomen $1\frac{1}{2}$ lines, to spinners slightly less than 1 line; length of another example rather less than 1 line to upper extremity of abdomen, and to spinners $\frac{3}{4}$ of a line.

The *cephalothorax* of this species is of ordinary form. Clypeus very prominent below, and its height exceeds half that of the facial space; colour yellowish-brown.

*Eyes* in normal general position; posterior row straight; anterior row much curved, the convexity of the curve directed forwards; the prominence on which the fore-central eyes (which are much the largest) are placed is strong and rounded. The central quadrangle is large, broader than long, and rather broader in front than behind; the hind-central pair are, at least, double the distance from each other that they are from the hind-laterals.

*Legs* moderately long, very slender, 1, 4, 2, 3, or 1, 2, 4, 3, of a uniform pale brownish-yellow colour.

*Falces* strong, similar in colour to the cephalothorax.

*Maxillæ*, *labium*, and *sternum* dark yellow-brown.

*Abdomen* large, much elevated, and rather rounded at the posterior extremity, which is wider than the anterior; on each side of the highest part is a low, subangular or bluntish prominence, and a little way below them towards the spinners in the median line is another prominence rather larger, obtuse, and somewhat cleft or indented at its extremity by a transverse indentation. The colour of the abdomen is dark brown, the hinder slope black, the sides blackish; on the upperside there is an angular silvery line on each side of the fore part; the inner extremities of these lines do not meet, but just behind them are four silvery spots in a small quadrangle, the two hinder spots forming sometimes an obtuse angular bar or chevron; two larger, almost contiguous, silvery spots are placed just in front of the posterior prominences, and two others nearly behind it, followed towards the spinners by two other pairs of smaller similar spots, those of the pair nearest the spinners being wider apart than the others. On each side of the hinder slope is a long, vertical, tapering silvery stripe, from the upper end of which a silvery diffused stripe runs towards the fore end of the abdomen. The underside has a large, well-defined, transverse, obtuse or somewhat pentagonal silvery bar across the middle, and between it and the spinners are two small silvery spots in a transverse line. The genital prominence and process are deep brown and of characteristic form.

*Hab.* GUATEMALA, San Antonio, near the city of Guatemala (*Sarg*).

## LINYPHIA, Latreille.

### **Linyphia læta,** sp. n.

*Adult female*, length to spinners $2\frac{1}{2}$ to 3 lines; length to extremity of caudal prolongation 3 to $3\frac{2}{3}$ lines.

*Cephalothorax* of normal form; colour reddish-orange.

*Eyes* rather closely grouped together and on small black spots, small, subequal, those of the posterior row almost in a straight transverse line; the interval between the hind-central pair is equal to a diameter, and each is distinctly, though not greatly, further from the hind-lateral on its side; the four central eyes form a trapezoid whose anterior is shorter than its posterior side, the other three sides being equal; the fore-centrals are nearly contiguous to each other, and those of each lateral pair are contiguous to each other and placed obliquely on a small tubercle. The height of the clypeus is half that of the facial space.

*Legs* slender, tolerably long, 1, 4, 2, 3, or 1, 2, 4, 3, furnished with a few slender spines on the tibiæ and metatarsi, mostly on the tibiæ. Colour yellow, tinged with greenish-brown.

*Falces* rather long, tolerably strong, vertical, slightly divergent, similar to the cephalothorax in colour, with red-brown extremities.

*Maxillæ* similar also to the cephalothorax in colour.

*Labium* and *sternum* reddish-yellow-brown.

*Abdomen* large, its hinder extremity drawn out into a short, obtuse, caudiform shape. The sides and upper-side are white, the latter with two longitudinal, uneven or irregularly dentated purplish-brown or blackish stripes, enclosing an elongate-oval space to the extremity of the caudal prominence; this oval space is bisected longitudinally by a brownish irregular, tapering central streak. The underside and the space from the caudal prolongation to the spinners are black or black-brown; the sides are marked by some very distinct black stripes and bars extending upwards from the underside, the foremost stripe bending sharply and running along the upper lateral margin to the fore extremity. There is some little variation in these markings, which can only be correctly understood from the figures given. The genital aperture is of a nearly circular or short transverse-oval form. In some examples the upperside is of a more or less uniform deep purplish-brown hue.

*Adult male*, length $1\frac{3}{4}$ to $2\frac{1}{2}$ lines.

The colours and markings of the abdomen of the female are more or less traceable in the male, but they are not so clear and sharply defined, and the abdomen is also almost cylindrical, though preserving the general form of that of the female. The colours of the cephalothorax, legs, and other parts are similar. In the male there is, a little way in front of the spinners, a transverse, curved, strong, and well-marked narrow opening or slit, spanning almost the whole width of the abdomen. I could not trace this in the female.

The *falces* are long, strong, the outer edge, when looked at from in front, sinuous, so that the extremities appear to be a little divergent. They are armed with teeth at the extremities, both on the anterior and posterior margin of the groove in which the fang lies when at rest. There is also a single tooth at the extremity near the inner side in front of each falx. Along the outer edge of the falces are some minute tubercles, each surmounted by a bristle. The fang is strong, somewhat constricted near the base and enlarging again near the middle.

*Palpi* moderately long, similar in colour to the legs; the cubital joint is short, but produced in front, and has at its upper termination a black, short, sharply-bent, corneous, spiny process, whose extremity is sharp-pointed and directed inwards. The radial joint is short, directed inwards, and with a very slight prominent point at the middle of the upper extremity; digital joint of moderate size and elongate-oval form; palpal organs well developed and rather complex, with various strong corneous processes and spines, of which enlarged drawings alone can give any clear idea.

*Hab.* MEXICO, Amula and Omilteme in Guerrero (*H. H. Smith*); GUATEMALA (*Sarg*).

Evidently an abundant species.

## BATHYPHANTES, Menge.

### **Bathyphantes sana,** sp. n.

*Adult female*, length slightly more than 1 line.

*Cephalothorax* short, oblong-oval, rounded and rather broad in front, somewhat flattened above, profile-line very slightly curved, lateral marginal impressions at the caput slight. Colour yellowish-brown, obscurely veined with black, and with a pale yellowish band running round the upperside of the clypeus and backwards on each side obliquely to near the thoracic indentation; the height of the clypeus, which is impressed immediately below the eyes, is less than half that of the facial space; behind and from each lateral pair of eyes a curved line runs backwards to the occiput, looking like a fine indentation.

*Eyes* rather closely grouped, occupying the whole width of the fore extremity of the caput; those of the posterior row in a straight (or nearly straight) transverse line, equal in size and equally separated from each other, the interval being scarcely more than half a diameter; those of each of the lateral pairs are almost contiguous to each other on a tubercular prominence, and are placed nearly at right angles to the posterior row; the fore-laterals are rather largest and have a slightly oblique direction inwards. The central quadrangle is much longer than broad, and its fore side shorter than the hinder one. The fore-central eyes are smallest, on a strong prominence, and very nearly contiguous to each other. The anterior row is strongly curved, the convexity of the curve directed forwards.

*Legs* short, slender, 1, 2, 4, 3, yellow; the tibiæ, metatarsi, and tarsi broadly but not very distinctly annulated with brown, furnished with hairs, each of the tibiæ also with one or two slender spines.

*Palpi* yellow, annulated with brown and without a terminal claw.

*Falces* rather long, not very strong, rather divergent at the extremities, on the upper margin of the inner side of which are four small teeth, and on the inner margin five very minute ones in a still shorter row.

*Maxillæ* rather long, straight, broad, somewhat rounded at the extremities. Colour brownish-yellow, with the extremities black-rimmed.

*Labium* very small, much broader than high, and rounded at the apex.

*Sternum* as broad as or rather broader than long, subtriangular; fore extremity curvi-truncate; posterior extremity broad and obtuse, as broad as the breadth of the coxa of the fourth pair of legs; colour brownish-yellow, suffused, mostly towards the margins, with blackish-brown.

*Abdomen* large, but short, and much elevated and rounded towards the hinder part; colour dull pale brownish, marked towards the fore part on the upperside with several short, longitudinal, parallel, darker brown lines, united posteriorly by a transverse brown bar; in front of these lines are a few minute whitish spots, and behind the bar, on the hinder slope, is an elongate wedge-shaped dark brown area, whose point ends just above the spinners, and its fore extremity is connected by a longitudinal central dark brown line with the transverse bar, this area being crossed by several transverse pale fine lines and bordered with a broadish white-spotted margin; the sides are marked with some irregular brown lines, and just above the underside is a line, more or less broken on each side, of minute white spots; spinners tolerably compact, of moderate length, the inferior pair stronger than the superior. The genital aperture is small and inconspicuous, but of characteristic form.

*Hab.* GUATEMALA, Choctum (*Sarg*).

## ? LEPTYPHANTES, Menge.

### **Leptyphantes dubia,** sp. n.

*Adult female*, length 1 line.

*Cephalothorax* a little longer than broad, outline of thorax (from above) well rounded, lateral marginal impressions at caput slight; fore extremity broadish and curvi-truncate; lower margin of clypeus prominent, its height exceeding half that of the facial space. Colour deep brown.

*Eyes* subequal, fore-laterals largest, fore-centrals smallest, those of the posterior row in a straight transverse line and equidistant from each other. Anterior row shortest, in a curved line, the convexity of the curve directed forwards and its eyes equally separated. Ocular area prominent, but not greatly so. The central

quadrangle very nearly a square; the fore side perhaps slightly shortest. Those of each of the lateral pairs are seated on a tubercular prominence, contiguous, and their direction oblique.

*Legs* tolerably long, slender, 4, 1, 2, 3; two or three long and slender spines on the tibiæ of the first and second pairs, one on the outside of the metatarsi, and one on the outside of the tarsi near the hinder end. Colour dull orange-yellow, the anterior sides of the femora and the fore extremity of the tibiæ dark yellow-brown.

*Falces* neither long nor very strong, straight. Colour dark yellow-brown, with the fore extremity pale yellow.

*Palpi* dark yellowish-brown, devoid of terminal claw.

*Maxillæ* short, a little inclined to the labium; colour blackish-brown.

*Labium* short, broader than long, rounded at the apex; similar in colour to the maxillæ.

*Sternum* longer than broad, broadly obtuse at the hinder extremity. The interval between the coxæ of the fourth pair of legs equalling the length of the joint. Colour black-brown.

*Abdomen* short-oval, tolerably convex above, in profile highest towards the hinder part; colour dull luteous; the upperside is almost entirely covered by a large triangular black area, the apex of the triangle touching the anterior extremity and the base nearly halfway down the posterior slope; a broad oblique black band on each side forwards, and the underside black, leaving a largish somewhat quadrate pale luteous patch just in front of the spinners. The genital aperture is of a quadrangular form, broader than long, and placed behind a large roundish convexity.

*Hab.* GUATEMALA, upper road to Chichochoc, Coban (*Sarg*).

It is with some doubt that I have placed this spider in the genus *Leptyphantes*, the presence of a long slender spine on the outside of the tarsi of the first and second pairs of legs, along with some other slight differences, may perhaps, on the discovery of other species, lead to their generic separation from the typical *Leptyphantes*.

## PHYSOCYCLUS, Simon.

### **Physocyclus rotundus,** sp. n.

*Adult female*, length 1½ lines.

*Cephalothorax* yellow, tinged with yellow-brown on the caput and in the normal indentations.

*Eyes* in three groups, three large ones on each side in a triangle, the two posterior ones contiguous to each other, the third in front contiguous to the hind-lateral, but not to the hind-central eye; the two minute eyes between these groups are in a straight line with their anterior eyes, and are near together but not contiguous, and are also nearly an eye's diameter distant from them. The height of the clypeus is more than double that of the facial space.

*Legs* long, slender, 1, 4, 2, 3, or 1, 2, 4, 3; yellow, immaculate, furnished with long hairs, but these had mostly been rubbed off, leaving, however, the minute tubercles on which they were placed. The length of the first pair did not greatly exceed that of the fourth.

*Falces* with a tooth at the extremity on the inner side. Colour like that of the cephalothorax.

*Maxillæ* rather long, straight, but greatly inclined over the labium, somewhat pointed at the extremity. Colour pale yellow-brown.

*Labium* rather large, in advance of the maxillæ, and convex in front, much broader than high, rounded (or sub-pointed) at the apex. Colour similar to the maxillæ.

*Sternum* broader than long, somewhat heart-shaped or subtriangular, the posterior extremity being, however, very broadly obtuse.

*Abdomen* nearly globular, higher than long; behind the genital aperture, which is a simple transverse fissure, is a transverse yellow-brown prominent plate in which are contained the spiracular openings; at a very short distance behind these are the spinners, placed at the apex of a subconical prominence, and of a yellow-brown colour. The abdomen is of a dull whity-brown hue, mottled obscurely with a darker colour.

*Hab.* GUATEMALA, Coban (*Sarg*).

## ULOBORUS, Latreille.

### **Uloborus signatus,** sp. n.

*Adult male*, length $1\frac{2}{3}$ lines; *adult female*, length $2\frac{1}{3}$ lines.

*Cephalothorax* (♂) nearly circular, slightly drawn out at the fore extremity of the caput; upper surface somewhat flattened, though moderately convex, hinder slope somewhat curved and rather abrupt. Colour dull orange, a large portion on each side dark yellow-brown, leaving a broad longitudinal central band, whose inner margins are strongly dentated; the fore extremity of this band is deeply indented, its outer corners reaching to the hind-lateral eyes, behind and between which the colour is dark yellow-brown. The surface of the cephalothorax is covered pretty thickly with coarse, somewhat adpressed whitish hairs. The central dentated band varies in width in different examples. The thoracic indentation is very strong and of a somewhat angular form.

The *eyes* are on black spots, in two transverse (looked at from above and behind) concentric curved rows scarcely differing in length; the convexity of the curve directed forwards, but looked at from in front the anterior row curves in an opposite direction. The fore-central pair are on a strongish prominence, and considerably the largest. The hind-centrals are rather further from each other than from the hind-laterals; the fore-centrals are much nearer to each other than to the fore-laterals. The central quadrangle is a little longer than broad.

The *legs* are moderately long and strong, 1, 4, 2, 3, those of the first pair much the longest and strongest; furnished with short spines, mostly on the anterior sides of the tibiæ and metatarsi of the first two pairs. Along the outer side of the femora of the 2nd, 3rd, and 4th pairs is a single row of long, slender, curved hairs, very similar to those noticed on some species of *Argyroepeira*, and present in both sexes; they issue from minute round tubercles. Colour yellow-brown, with dull orange annuli, more or less distinct. The femora of the first pair are entirely yellow-brown, excepting a single well-defined dull orange annulus near the fore extremity, and nearly as broad as the femur at this point.

*Palpi* short, radial and cubital joints very short, furnished with strong bristly hairs; digital joint short, but broad, and spreading out like a round dish-cover. Palpal organs of great size, consisting chiefly of a large, globular, corneous, shining, orange-coloured lobe, with a circularly coiled black spine between it and the outer margin of the digital joint; the hinder part of the globular lobe appears to be cleft and the spine mentioned to issue from the cleft.

*Falces* moderate in length and strength, and of a dull yellowish colour.

*Maxillæ* and *labium* dull yellowish, suffused with brown at their base.

*Sternum* yellow-brown, palest at its anterior extremity.

*Abdomen* rather elongate-oval, much and roundly elevated at its fore extremity, and with a long backward slope to the spinners; on each side near the summit of the elevation is a small, low, conical prominence, indicated by a blackish spot at its base in front and a white one behind. Its colour is dull brownish or yellowish-brown, mixed with darker brown and black markings and white spots. The most noticeable of these spots are two in a transverse line at the fore margin, followed by others, forming sometimes a short transverse row in front of each prominence, and another behind each prominence; about the middle of the slope towards the spinners is a black or deep brown marking, longer than broad, widest behind, where it is deeply and sharply emarginate, truncate before, and bordered by a distinct white line; this marking is very plain and characteristic in both sexes and the space between it and the spinners is also deep brown or black. The sides are marked by some broken, longitudinal, parallel, brown or blackish lines, leaving several slightly oblique, curved, irregular pale lines. The underside is dark brown or blackish in an oblong form, margined with white, and with a large angular line or circumflex-accent mark on its hinder part; the middle of the underside is strongly and roundly protuberant; the infra-mamillary organ or supernumerary spinner is conspicuous, and immediately in front of it is a transverse lip or fold of an obtuse or roundish form, sometimes rather prominent in the middle, evidently covering the entrance to a respiratory organ, and usually indicated by a transverse white margin. Whether this is common to all the members of the genus I do not know, but it is observable in several species that have come under my notice; it does not appear to have been noted by M. Simon in his diagnosis of the group (Hist. Nat. des Araignées, i. part 1, p. 211, &c.). The spinners are pale brownish-yellow, though the superior pair are black.

The *female* is of a generally greyer hue than the male, but the markings are mostly similar. The cephalothorax,

however, excepting the narrow central longitudinal stripe (which is generally narrower in this sex) and a narrow pale margin, is uniformly deep brown; the black marking bordered with white on the hinder part of the abdomen is equally, or more, conspicuous, and the anal prominence (in both sexes) is unusually developed, pointed and articulated, its articulations evidently the continuation of some false articulations at the extremity on the upperside of the abdomen whence it springs; in well-marked specimens the sides of the abdomen in the female are yellow-brownish, marked with several slightly oblique black and white broken lines. The calamistrum on the tibiæ of the fourth pair of legs extends almost throughout the whole length of the joint. The genital aperture and process are well developed, prominent, and of characteristic form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## **Uloborus cinereus,** sp. n.

*Adult female,* length $1\frac{1}{4}$ lines.

General form, structure, and appearance normal.

*Cephalothorax* pale yellow, clothed with coarse white hairs; sides of caput and thorax blackish; a white diffused spot just in front of the thoracic indentation, and another smaller one just behind each hind-lateral eye.

*Eyes* in normal position and subequal, but the distance between the two transverse rows is rather greater than in the species before described. The central quadrangle is distinctly longer than broad, and its anterior side shorter than the posterior; the hind-central eyes are very distinctly further apart than from the hind-laterals.

*Legs* moderately long, 1, 4, 2, 3, not very strong, the length of the first pair not greatly exceeding that of the fourth pair. Spines apparently absent. Colour pale yellow, the tibiæ of the first pair, excepting a patch at the base on the upperside, black; genuæ blackish or dark brown, and a portion underneath the anterior extremity of the femora of the first pair black. Calamistrum on the basal half of the metatarsi of the fourth pair, and some coarse tufted hairs at the fore extremity of the tibiæ of the first pair. The fore extremity of the tibiæ of the fourth pair is suffused with blackish, and there are a few coarse tufted hairs on the upperside.

*Falces*, *maxillæ*, and *labium* pale yellow-brownish.

*Sternum* dark yellow-brown, its posterior extremity a little produced in an obtuse form.

*Abdomen* produced, but not much elevated, on the upperside in front; at its highest part are two low, blunt, subconical or roundish prominences in a transverse line. Colour white, the sides marked or suffused with blackish; underside blackish, a space around the base of the spinners black. Spinners dull brownish-yellow, the superior pair tinged with black. Abdomen probably more or less clothed with white hairs (mostly rubbed off in the only example seen). Genital aperture of distinctive form. Lip just in front of the supernumerary mamillary organ well marked and fringed with longish hairs.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## **Uloborus spernax,** sp. n.

*Adult female*, length $1\frac{1}{3}$ lines.

General form and structure normal.

*Cephalothorax* yellow-brown, more or less suffused with dark brown, and thinly clothed with grey hairs; a white spot at the thoracic junction, and two on the lateral margin on each side, which is broad and dull yellow.

*Eyes* subequal, their general position normal; those of the fore-central pair no larger than the hind-laterals. Central quadrangle as long as broad, and its fore side distinctly shorter than the hinder one. The interval between the hind-centrals is distinctly greater than that between them and the hind-laterals.

*Legs* moderately long, 1, 4, 2, 3, those of the first pair not so long in proportion as in some other species of the genus. Spines absent; a group of somewhat spiniform hairs at the fore extremity of the tibiæ. Colour pale yellow. The calamistrum extends only along the posterior half of the metatarsi of the fourth pair.

*Falces*, *maxillæ*, *labium*, and *sternum* slightly darker than the legs.

*Abdomen* elevated above, with two slight protuberances in a transverse line at the highest part. Colour dull brown. On the upper part, and upper part of the sides, it is clothed with golden-brown hairs; the two protuberances are each furnished with a tuft of somewhat spine-like hairs, of which there are two smaller tufts on each side in a longitudinal line converging towards and above the spinners. Lower part of the sides and underside white; inferior spinners pale yellow-brown, superior spinners darker yellow-brown. The lip in front of the infra-mamillary organ is well developed and rather pointed. Genital aperture characteristically different from those of the other species above described, though bearing a certain resemblance.

*Hab.* Mexico, Teapa in Tabasco (*H. H Smith*).

## Uloborus variegatus, sp. n.

*Adult female*, length $1\frac{1}{2}$ to 2 lines.

General structure normal. Cephalothorax deep brown or black, clothed with coarse grey pubescence.

*Eyes* from above and a little in front, in two transverse concentric rows; the hind-centrals are slightly further from each other than from the hind-laterals; the fore-centrals considerably largest, and nearer together than to the fore-laterals; the central quadrangle a little longer than broad.

*Legs* annulated with pale yellowish-white and black, or (in the brown-tinted examples) with yellowish and dark brown. A single pale annulus, about one-third of the length of the femora, from the anterior end. Relative length 1, 4, 2, 3, those of the first pair not inordinately longest. Calamistrum on the metatarsi of the fourth pair running along the larger portion of the joint. Armature as in the other species, and all the legs are furnished with coarse grey hairs.

*Falces* brown or yellowish-brown.

*Maxillæ* and *labium* brown, paler at the extremities.

*Sternum* dark brown or black, clothed with coarse grey pubescence.

*Abdomen* greatly and very obtusely raised at the fore part, with four rounded prominences at its summit, forming a large square; the two anterior prominences are smaller than the posterior ones and round, the posterior round but subconical. The colour of the abdomen is a mixture of black, brown, grey, and white, or black-brown, yellow-brown, grey, and white, and it is pretty thickly clothed with coarse grey and golden pubescence; at the fore margin of the upperside are two large, almost confluent, white patches in a transverse line, and a little way above the spinners are two short white lines forming a circumflex-accent mark whose point is directed forwards. The underside is greatly protuberant in the middle, and the lip-like projection just in front of the supernumerary spinners (or infra-mamillary organ) is strongly developed. The genital aperture is large and much resembles that of *Uloborus vicinus* described below, but still differs characteristically.

In immature examples the posterior pair of prominences on the abdomen are stronger than in the adults.

*Hab.* Mexico, Omilteme in Guerrero (*H. H. Smith*).

From Mr. Smith's notes it would seem that these spiders are gregarious, or inhabit the webs of a larger spider, but this point is not quite clear. The species is one in which there is a great variety in colours and markings; one example (which I believe to be only a variety) has the abdomen of a uniform dull brownish hue, regularly and thickly covered with small white spots of varied shape.

## Uloborus vicinus, sp. n.

*Adult female*, length $1\frac{2}{3}$ lines.

Closely allied to *Uloborus signatus* both in form, colours, and markings, but much smaller; the characteristic black marking on the posterior slope of the abdomen, edged with white in that species, is in this spider obsolete or only indicated by two or four small white spots on the general dark colour of the slope; the pale whitish-yellow annulus near the fore extremity of the tibiæ of the first pair of legs is in the present species clear and distinct, but very narrow. The cephalothorax is uniformly black, with a narrow pale

margin, and clothed with grey hairs; the central pale stripe is narrow, and the thorax is gibbous above on each side at the beginning of the posterior slope. Near the fore extremity of the abdomen is a large black patch bordered with white irregular spots; the posterior slope (in one example) is black, with two or three pairs of white spots placed transversely—in another example it is dusky brown, with two longitudinal nearly parallel diffused whitish stripes from the prominences at the top to just above the spinners; the sides are either dusky or black, with two slightly oblique curved lines. The transverse lip in front of the infra-mamillary organ is present. The genital aperture is also characteristically different from that of *Uloborus signatus*.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## ARGIOPE, Savigny.

### **Argiope blanda,** sp. n.

*Adult male,* length $1\frac{3}{4}$ lines.

*Cephalothorax* of normal form; pale yellow in colour, clothed with short grey hairs, and with a broad longitudinal band of dark brown on each side, leaving a central band of yellow, narrowest at the occiput, broadening each way, and bifid at the anterior extremity, behind the ocular area, and a broadish marginal yellow band at the thorax.

*Eyes* normal; interval between the fore-centrals much greater than between each and the fore-lateral next to it.

*Legs* moderate in length and strength, 1, 4, 2, 3, armed with distinct, but not numerous, spines. Colour dark brown; the tarsi pale yellow-brown, and the posterior sides of the femora of the second pair yellow.

*Palpi* short, yellow; radial and cubital joints very short; digital joint large, brown; palpal organs highly developed, prominent, complex, with characteristic spiny processes, whose exact form can only be given by figures.

*Falces* rather weak; deep blackish-brown in colour, with a pale yellowish patch towards their extremity on the inner side.

*Sternum* black-brown, with a large, well-defined, yellow marking, trifid at its hinder extremity and very like a *fleur-de-lis* reversed.

*Abdomen* oval, slightly truncate before, blunt-pointed behind; whitish-yellow in colour, and furnished with a few long bristly hairs; a large brown subtriangular area occupies the posterior two-thirds of the upper-side, its lateral margins dentate, black, and with curved indentations, the anterior portion or base of the triangle being less dark-coloured than the rest. The sides of the abdomen are marked with longitudinal and oblique black lines; the underside is black (or pale, thickly marked with black) with a white margin, at the middle of which on each side is a strong, sharply defined, tooth-like dentation; sometimes (in immature specimens of both sexes) the two dentations meet in the middle and form an angular bar.

The female (immature) resembles the male, excepting that the legs have more yellow about them, and that on each side of the abdomen towards the hinder extremity is a small conical prominence, and another at the hinder extremity itself.

*Hab.* GUATEMALA, Santa Ana (*Sarg*).

## GEA, C. L. Koch.

### **Gea prædicta,** sp. n.

*Adult male,* length rather less than 2 lines.

*Cephalothorax* large; thorax very rounded; caput short, narrow; lateral marginal impressions at the caput strong. Colour yellow-brown, closely reticulated with dark brown, paler on the margins of the thorax. Surface clothed thinly with short grey hairs.

*Eyes* occupying the whole width of the fore extremity of the caput; posterior row much the longest and greatly curved, the convexity of the curve directed backwards; anterior row with a very slight curve, but similarly directed; central quadrangle longer than broad, and its anterior a little shorter than its posterior side;

the interval between the hind-centrals is less than between each and the hind-lateral next to it, but the fore-centrals are further from each other than from the fore-laterals, which are smallest and the fore-centrals largest of the eight, each lateral pair seated on a strong tubercle; clypeus low, equal in height to the diameter of a fore-central eye, and retreating.

*Legs* 1, 4, 2, 3, or 4, 1, 2, 3, moderately strong, not very long, furnished with hairs and spines, the latter most numerous on the tibiæ of the second pair. Colour yellow-brown, with a pale, not very distinct, annulus near the base of the tibiæ; the metatarsi and tarsi pale brownish-yellow.

*Falces* rather weak, with a strongish, somewhat tuberculiform, prominence at their base in front. Colour brownish-yellow, marked with dark yellow-brown.

*Palpi* short; cubital joint with a long, strong, prominent tapering bristle near the middle of the fore side; digital joint large, with its outer side directed underneath. Palpal organs of great size and development and directed outwards; they are not very complex, but have a strong, corneous, prominent, somewhat furcate, process in front, with a much smaller spiny one behind it, the whole encircled at the base by a strong corneous rim or spine.

*Maxillæ* and *labium* blackish, with somewhat whitish extremities.

*Sternum* about equal in length and breadth, with a large central triangular area, strongly dentated on the sides, and of a pale yellowish hue, with three white spots at the apex, a large elongate one quite at the angle, and a small one on each side.

*Abdomen* short-oval, pointed, but not sharply, behind, clothed with hairs and longish strong bristles, some almost spines. Colour pale yellowish, pretty thickly marked with black, mostly in a transverse direction; there is no special pattern traceable, but at the middle of the anterior extremity are two small, round, adjacent, whitish-yellow spots, and at a little distance further back are two long, conspicuous, transverse, pale whitish band-like markings with black margins, one on each side of the median line, where they meet; behind the outer extremity of each of these markings is another small one, following each of which again are several more or less distinct broken lateral stripes of the same hue. Anal prominence of large size and segmentate. Spinners tolerably strong, those of both the upper and under pairs about equal and 2-jointed. Underside blackish, with a large irregular but well-defined whitish bilobate marking on each side of the middle, and a round spot of the same colour between it and the spinners.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## TURCKHEIMIA, Cambridge.

### **Turckheimia scelesta,** sp. n.

*Adult female*, length $3\frac{1}{3}$ lines; length of abdomen $2\frac{1}{3}$ lines.

*Cephalothorax* of normal form; the depression between the caput and thorax very strong, as also are the oblique indentations dividing the caput from the thorax. Thoracic indentation deep, somewhat curved or transverse, the convexity of the curve directed forwards, and immediately in front of it is a somewhat tuberculiform shining prominence, broader behind than before, and its sides hollow or indented. The cephalothorax is of a deep yellow-brown colour; ocular region much paler, clothed thinly with grey hairs.

*Eyes* subequal, the fore-centrals largest. The central quadrangle is longer than broad, and its anterior side much longer than the posterior. The interval between the hind-centrals is equal to half a diameter, that between the fore-centrals slightly over a diameter.

*Legs* short, strong, 1, 4, 2, 3, 1 and 4 very nearly equal, furnished with hairs and spines. Colour yellow, rather distinctly annulated, and marked with yellow-brown and black-brown; the greater part of the femora and the genuæ of the first pair black-brown.

*Falces* strong, vertical, deep yellow-brown.

*Maxillæ* and *labium* yellow-brown.

*Sternum* longer than broad, its posterior extremity rather drawn out and pointed; its colour is yellow, with two central, longitudinal, slightly converging, elongate, deep brown patches. Prominences on the margins opposite the insertions of the legs; the two anterior prominences are very convex, round, and of abnormally large size, nearly coalescing at the middle of the fore margin of the sternum.

*Abdomen* large, double as long as broad, somewhat oblong, and generally flattish above. The fore extremity

projects greatly over the base of the cephalothorax, and the hinder extremity is produced beyond the spinners, so that the length from them to the extremity considerably exceeds the length to the base of the cephalothorax, the spinners being nearly about halfway between the two extremities. At the middle of the fore extremity is a somewhat tuberculiform blunt-pointed prominence; behind this on each side, about a third or less of the distance to the hinder end, is a conical prominence, and the hinder extremity is divided into two large, lateral, somewhat rounded, conical, slightly divergent prominences, between which are two others distinctly smaller, or rather a large one cleft in two by a transverse cleft. These terminal prominences are pretty thickly clothed with short bristly hairs. The colour of the abdomen is a mixture of dull yellowish-brown, whitish-yellow, and black, in spots, short lines, and irregular markings, the most conspicuous on the upperside being four black patches in a somewhat quadrate form behind the anterior lateral prominences; the underside of the two large terminal prominences is black, as also are the spinners and an irregular space round them. The anal prominence is very distinctly segmentate. The genital process is small, placed on a large transverse prominence, and its form and structure are very distinctively characteristic; on each side beneath the abdomen, between the genital process and the spinners, is a small but distinct tuberculiform prominence, white towards the outer side, black on the inner side.

*Hab.* Costa Rica, San José (*J. F. Tristan & P. Biolley, ex Sarg*).

This spider is nearly allied to *T. walckenaerii*, Cambr., anteà, p. 47, t. 8. figg. 6, and *T. diversa*, Cambr., anteà, p. 136, t. 16. figg. 11; it is, however, of a much longer form than *T. walckenaerii*, and the shape of the abdominal prominences is different from those of *T. diversa*, as also are the respective genital processes of all three species. *T. walckenaerii* is most probably identical with a species subsequently described by Keyserling as *Epeira walckenaerii* (Die Spinnen Amerikas, *Epeiridæ*, Bd. iv. 1892, p. 98, t. 5. fig. 85), and till then considered by him to be *Epeira bifurcata*, Walck. Whether the genus *Turckheimia*, as based upon *T. nodosa*, Cambr. (anteà, p. 46, t. 4. figg. 11), is a good one or not is perhaps uncertain; it may possibly be found to run into *Cyclosa* through *T. walckenaerii*, *T. diversa*, and the present species. M. Simon, in his 'Histoire des Araignées,' sinks this as well as *Cyclosa*, Cambr., ad partim, and between twenty and thirty other hitherto recognized genera or parts of genera, into one generic group, under *Araneus*, Clerck (=*Epeira*, Walck.), thus bringing together an enormous and remarkably heterogeneous group, almost as though it were intended as a kind of refuge for destitute Epeirids, for which the author was not quite prepared to find any definite position elsewhere.

## CYCLOSA, Menge.

### **Cyclosa tuberculifera,** sp. n.

*Adult male*, length 1¼ lines.

This species is very closely allied to the well-known European form *Cyclosa conica*, Pallas, resembling it nearly in general form, colours, and markings; it is, however, but little more than half the size of that species. The caput is less drawn out, and the fore-central eyes are on a shorter prominence; the posterior prolongation of the abdomen is smaller and has a more tuberculiform appearance, and the palpal organs are quite differently constructed.

*Cephalothorax* dark brown, clothed thinly with greyish and other hairs.

*Legs* furnished with strongish spines. Colour yellow, inclining to orange-yellow on the tibiæ, tarsi, and metatarsi; the anterior portion, exceeding half, of the femora of the first and second pairs black-brown;

the tibiæ and metatarsi annulated with, not all well-defined, black-brown annuli; rather less than one-half of the femora of the third and fourth pairs is black-brown.

*Palpi* short, yellow; digital joint and palpal bulb dark brown and of large size. Palpal organs highly developed and prominent.

*Sternum* black-brown, marked with several converging brownish-yellow marks, and three white spots, one at each of the anterior corners, and the third (forming a triangle with the others) at the posterior extremity.

*Abdomen* of a pale dull luteous hue, marked pretty closely with black, most thickly on each side of the fore part and above the tuberculiform prolongation, where it forms a largish transverse oblong patch, including several whitish spots in the middle and a short longitudinal central black bar in front; on either side of this bar is an oblique diffused white patch. The extremity of the hinder prominence bears a white spot; there are also two very distinct white spots in a transverse line halfway between the oblique white patches and the anterior margin, at the middle of which is a small white spot. The underside is black, and on the middle of the lateral margins on each side is a small indistinct white point.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## AMAMRA, Cambridge.

### **Amamra clivosa,** sp. n.

*Adult female*, length $3\frac{1}{4}$ lines.

This spider is closely allied to *A. bituberosa*, Camb. (anteà, p. 55, t. 3. figg. 11, 11 *a–e*), but may be at once distinguished by the broader cephalothorax and more robust caput, a slight difference in the form of the genital aperture, the larger size of the abdominal eminences, as well as in colours and markings.

The *cephalothorax* has a deep reddish-brown transverse band at the occiput; the rest of the caput and thorax are reddish-yellow-brown, with four rather converging, fine, darker brown lines running from the central ocular rectangle to the occiput, and a transverse line of the same colour on each side of the caput, and in fact traceable quite over and meeting on the middle of the caput, and the thorax is also marked with brown. The ocular area and clypeus are deep reddish-brown; the whole is clothed thinly with short greyish hairs.

The *eyes* do not appear to differ much from those of *A. bituberosa*.

*Falces* pale yellow-brown, with the extremities red-brown.

*Legs* short, strong, subequal in length, 2, 4, 1, 3, the femora of 1, 2, 4 deep brown, while those of 3 are yellow-brown, banded with paler brownish-yellow; the rest of the legs is dull yellowish, indistinctly annulated and marked with darker yellow-brown. They are furnished with not very long nor strong spines and coarse grey hairs.

*Maxillæ* and *labium* dark yellow-brown, with pale whitish extremities.

*Sternum* dark yellow-brown.

*Abdomen* large, oval; near the fore extremity on the upperside are two strong, somewhat roundly obtuse, humps or eminences in a transverse line, with a slight subconical point at the top (rather behind) of each. In front of these eminences, nearer to the fore margin in the centre, is a very much smaller protuberance, forming a yellowish patch, with a small group of short black bristly hairs in front of it. The abdomen is yellow-brown in colour, clothed with short hairs and, thinly, with short black spine-like bristles, some of which appear to be of a slender lanceolate form. On the hinder part between the prominences and the spinners, and near the former, are two strongish, depressed, dark brown spots in a transverse line, with a smaller dark brown spot edged with yellowish behind each; this is followed halfway to the spinners by two more, larger, depressed, curved spots of the same colour, and immediately behind each of these is a largish, well-defined, somewhat inverted umbrella-shaped, deep black-brown patch, edged with yellowish, and followed to the spinners by two rather converging lines of small deep-brown points or spots, five spots in each line. The spinners are short and compact. The underside is for the most part dark brown. The genital aperture and process are of characteristic form, though much like those of *A. bituberosa*.

*Hab.* MEXICO, Amula in Guerrero (midway between Tixtla and Chilapa) 6000 feet (*H. H. Smith*).

## THOMISUS, Walckenaer.

### **Thomisus odiosus,** sp. n.

*Adult male*, length slightly more than 1 line.

*Cephalothorax* as broad as, if not slightly broader than, long, well rounded on the sides behind, truncate in front. Ocular area occupying the whole width of the caput; the prominent tubercle on which the hind-lateral eye on each side is seated forms at its anterior corner an obtuse, whitish, conical prominence between the eyes of each lateral pair. A broken whitish keel-like ridge also runs between these two prominences a little in front of the hind-central eyes. The height of the clypeus is about twice the breadth of one of the fore-central eyes. The colour of the cephalothorax is brightish yellow-brown, a largish indistinct central patch or broad band surrounding the thoracic indentation being of a paler hue. On the margins and sides of the hinder part of the thorax are a border of short spines and minute tubercles.

*Eyes* small; posterior row gently curved, the convexity of the curve directed forwards; the anterior row much the shortest, and its curve in the same direction, but stronger; the interval between the hind-centrals is distinctly greater than that which separates each from the hind-lateral next to it. The fore-centrals are rather smaller than the fore-laterals, and are also further from each other than from the fore-laterals. The central quadrangle is broader than long, and its anterior is shorter than its posterior side.

*Legs* of the first two pairs long and moderately strong, scarcely differing in length. Spines beneath the metatarsi and tibiæ of the first and second pairs, (apparently) two pairs beneath each, but there is probably some variation in this in different examples—one example had none beneath the tibiæ of the second pair on one side, while on the other there was a single one; on the tibiæ of the first pair also there were but two spines, and these in a longitudinal line. The femora of the first and second pairs have five spines in a longitudinal row along the posterior side. The colour of the legs of the first and second pairs is dark reddish-yellow-brown, the metatarsi and tarsi clear yellow; the third and fourth pairs are short, yellow; the femora of the third pair have three spines in a longitudinal line on the posterior side, those of the fourth pair two spines.

*Palpi* short, yellow; radial and cubital joints very short, the former having a small prominent apophysis at its extremity underneath, and at its outer extremity a tapering one, ending in a short spine or nail, the whole as long or longer than the joint itself; digital joint rather small, oval; the palpal organs simple, consisting of a circular, rather flattened, corneous bulb, surrounded closely by a fine black spine.

*Falces* short, strong, subconical; colour pale yellow-brown.

*Maxillæ* and *labium* similar in colour to the falces.

*Sternum* as broad as long, hollow-truncate before, obtusely pointed behind; colour yellow.

*Abdomen* broad, flattened-convex above, somewhat subangular on each side, rather more than halfway to the spinners, and slightly broader there than at the fore extremity. Colour brownish-yellow, rather deepest in the central region, where are the normal five impressed spots of a deeper hue. The sides and hinder part are rugulose, and there are a few short spines along the rugæ. Underside pale yellowish. Spinners normal.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## ERISSUS, Simon.

### **Erissus pustulatus,** sp. n.

*Female* (scarcely adult), length $2\frac{1}{2}$ lines.

*Cephalothorax* about equal in length and breadth, much broadest behind; lateral marginal impressions at the caput rather strong. Colour dark yellow-brown, with a broad central longitudinal band, a little constricted at the occiput, running from the posterior extremity to the eyes; a narrow marginal line on each side of the thorax, and some broken irregular submarginal spots on the thorax, of a brownish-yellow hue; a dark yellow-brown central line runs from between the hind-central eyes to the thoracic indentation. The cephalothorax is clothed thinly with short whitish erect hairs; four black bristles, each issuing from a small tubercle, form a quadrangle broader behind than before, just behind the thoracic indentation.

The caput has a few black prominent bristles in the ocular region and on the clypeus, the height of which is much less than half that of the facial space.

*Eyes* very unequal in size, the fore-laterals much the largest, the fore-centrals smallest; they form very nearly a semicircle; the curve of the anterior row is much the strongest; the convexity of the curves of both rows is directed forwards. The four centrals form a quadrangle whose length is much greater than its breadth, and its anterior shorter than its posterior side. The eyes of the hinder row are about equally separated.

*Legs* moderately long, very unequal in length, 1, 2, 4, 3, or 2, 1, 4, 3, but little difference between 1–2 and 3–4. Those of the first and second pairs robust, armed with spines, of which there are four pairs of strong ones in a longitudinal series beneath the tibiæ and two pairs beneath the metatarsi, and one or two lateral spines. The colour of the legs is dull yellow tinged with orange, and faintly and irregularly annulated with brownish; the third and fourth pairs are yellow, and the spines few and weak; a compact claw-tuft beneath the tarsal claws.

*Falces* strong, rather long, straight, somewhat tapering, of a dull orange-yellow-brown colour, with an irregular dark brown patch at the base and a few strong bristles towards their inner sides.

*Maxillæ* strong, moderately long, straight, rounded at their extremity on the inner side, of a yellow-brown hue.

*Labium* similar in colour to the maxillæ or rather darker, rather more than half their length, and of a somewhat tapering form, truncated at the apex.

*Sternum* longer than broad, the posterior extremity drawn out into a point between the coxæ of the fourth pair of legs, which are in rather close proximity to each other. The colour is yellowish, with a broadish margin and central patch of dusky brown.

*Abdomen* oval; upperside yellowish-white, almost entirely occupied by a broad, central, longitudinal, strongly dentated, yellow-brown band, broadest at the middle, and along each lateral margin are four shining, transparent, dull, amber-coloured, circular, convex spots or pustules of different sizes, forming a slightly curved longitudinal line on each side; sides dull brownish-yellow, with several obscure oblique whitish lines; underside brownish-yellow along the middle, margined laterally by a whitish suffused line. The form of the genital aperture was plainly visible, though not yet perfectly developed. The abdomen is thinly clothed with hairs and a few dark prominent bristles.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

## TROCHOSA, C. L. Koch.

### **Trochosa insignis,** sp. n.

*Adult male*, length $7\frac{1}{3}$ lines; length of cephalothorax 4 lines, breadth of ditto 3 lines.

*Cephalothorax* oval, truncated in front; lateral marginal impressions at the caput moderate, profile level. Colour dark yellow-brown, deepening to black-brown on the ocular area, with darker converging lines and three well-defined longitudinal orange-yellow-brown bands; the central band is the narrowest, and begins almost as a mere line clothed with white hairs, close behind the anterior row of eyes, widening behind the posterior row; the two lateral bands run through the caput as well as the thorax, leaving a narrower dark yellow-brown submarginal band and a marginal line clothed with white hairs.

*Eyes* in the ordinary position; the quadrangle formed by the four large posterior eyes is slightly broader than long, and its anterior side distinctly shorter than the posterior side; the anterior eyes of the quadrangle are larger than the posterior eyes; the anterior row of four eyes forms a very nearly straight transverse line (if curved, the convexity directed backwards), a little shorter than the second row, and its eyes are about equally separated by less than a central eye's diameter; the two central eyes are largest. The centre of the clypeus (which is very narrow) is orange-yellow-brown, clothed with white hairs, as also is the fore extremity of the orange-yellow-brown lateral band on each side. The fore part of the caput is furnished with some long, strong, black bristles.

*Falces* powerful, dark orange-brown, thickly furnished with black hairs and bristles.

*Palpi* moderate in length and strength; colour yellow-brown; cubital and radial joints short but of equal length; the humeral joint has four short black spines in a transverse row near the fore extremity of the

upperside, the two middle spines nearer together than to the lateral ones, and a single stronger black spine a little way behind them. The radial joint also has several short spines in front; digital joint nearly as long as the radial and cubital joints together; basal half short-oval, whence the rest is somewhat pinched in and finger-like; palpal organs beneath the basal half and of characteristic structure.

*Legs* long, strong, furnished with spines and a dense scopula beneath the whole length of the tarsi and metatarsi of the first and second pairs and beneath the tarsi and a portion of the metatarsi of the third and fourth pairs; and beneath the two terminal claws is a small claw-tuft. The tarsi of the first pair are slightly curved. The colour of the first pair is deep brown, the femora darkest, the tarsi yellow-brown. The other legs are yellow-brown tinged with orange; the femora dark brown underneath, with two longitudinal parallel dark brown lines on the upperside, those on the femora of the first pair not so distinct, owing to their darker ground-colour, but still traceable. The femora are clothed with, among others, numerous white hairs of a pubescent kind.

*Maxillæ* and *labium* yellow-brown.

*Sternum* rather small, oval, brown, with yellow-brown margins, and a longitudinal pale yellow-brown central line on its fore half, the whole furnished with long, coarse, bristly, black and other hairs.

*Abdomen* rather narrow-oval; on the middle of the fore half of the upperside is a broad, deep brown, well-defined, central longitudinal band, widening gradually backwards; two small, deep brown, projecting points (one on each side) at the end; thence to the spinners is a longitudinal series of five, slightly diminishing, short but strong, clearly defined, nearly black, angular bars or chevrons, the apex of each running into the angle of the one in front of it; the central band and chevrons are bordered from end to end with a distinct pale stripe clothed with yellowish and grey hairs; the sides of the abdomen are deep brown, melting into the paler yellow-brown of the underside, which is marked with three longitudinal blackish lines, the central one ending in front of the genital aperture, with a somewhat triangular or spade-shaped dark brown patch. Spinners short, compact, the inferior pair strongest.

*Hab.* Costa Rica, San José (*J. F. Tristan & P. Biolley, ex Sarg*).

## ECHEMUS, Simon.

### **Echemus pedestris,** sp. n.

*Adult female,* length 2 lines.

*Cephalothorax* much longer than broad, not greatly convex above, oval, truncate in front; the lateral marginal impressions at the caput are slight; colour yellow-brown, marked with somewhat scratchy brown markings, chiefly following the direction of the normal indentations. The height of the clypeus is equal to the diameter of the fore-central eyes.

*Eyes* rather large and closely grouped, in two transverse rows of nearly equal length, both slightly curved and the convexity directed backwards, the posterior row rather the longest; all are pearly-white, except the fore-centrals, which are grey. The hind-centrals are of an oblong-oval form, placed obliquely and touching at their hinder extremities; the hind-laterals are near but do not touch the hind-centrals; the fore-centrals, which are smallest, nearly touch the fore-laterals, and are separated from each other by nearly half a diameter. The central quadrangle is longer than broad, and those of each lateral pair are separated by about half the diameter of one of the hind-laterals.

*Legs* tolerably long and strong, especially the femora, subequal, 4, 1, 2, 3,—1 and 2 almost equal; clothed with coarse hairs and spines, the latter not numerous nor very strong, there being none beneath the tibiæ and metatarsi of the first and second pairs; colour dull yellowish, the genuæ and tibiæ of the first and second pairs strongly suffused with blackish. Neither scopula nor claw-tuft.

*Falces* moderately strong, prominent in front, similar in colour to the cephalothorax.

*Maxillæ* strong, inclined towards the labium, broadly and obliquely impressed across the middle; palpi springing from halfway between their base and extremity.

*Labium* rather higher than wide at the base, narrower at the apex, which is rounded, and rather more than half the length of the maxillæ.

*Sternum* oval, pointed behind, rather curvi-truncate in front. The maxillæ, labium, and sternum are similar in colour to the legs.

*Abdomen* somewhat oblong, truncate before and a little rounded at its hinder extremity and flattish above, clothed with short coarse hairs and numerous bristly ones at the fore margin; colour dark mouse-coloured, with a pale ill-defined patch on the upperside at the middle of the fore end. Inferior spinners double the length of the superior ones, cylindrical, and furnished with a very short second joint. Genital aperture of large size and characteristic form.

*Hab.* MEXICO, Amula (*H. H. Smith*).

## CLUBIONA, Latreille.

### **Clubiona mordica,** sp. n.

*Adult female*, length very nearly 4 lines.

The general structure and appearance of this species is quite normal.

The *cephalothorax* is of an orange-yellow-brown colour, clothed with fine hairs and grey pubescence. The height of the clypeus is equal to the diameter of one of the fore-central eyes.

*Eyes* in the normal position, forming a segment of a circle; the curve of the posterior row is very slight, and its convexity directed backwards; the shorter anterior row is more curved, and its convexity directed forwards. The intervals between the eyes of the posterior row are equal; that between the fore-centrals is slightly greater than that between them and the fore-laterals, which last are largest of the eight. Central quadrangle a little longer than broad, and its anterior shorter than its posterior side.

*Legs* short, strong, 4, 1, 2, 3; colour lighter than that of the cephalothorax. Beneath each of the tibiæ and metatarsi of the first and second pairs are two pairs of spines of unequal length; a scopula beneath the tarsi and metatarsi of the first and second pairs, that beneath the tarsi of the third and fourth pairs thin, and beneath the fore extremity of the metatarsi of those pairs the hairs culminate in a kind of tuft or brush. A strongish compact claw-tuft beneath all the terminal claws.

*Falces* powerful, well arched or prominent in front towards their base, and furnished with numerous strong bristly hairs; similar in colour to the cephalothorax.

*Palpi* similar in colour to the legs. Digital joint furnished beneath with a strong tuft of bristly hairs.

*Maxillæ* and *labium* normal, and similar in colour to the cephalothorax.

*Sternum* oval, slightly hollow-truncate in front and pointed behind; colour brownish-yellow.

*Abdomen* dull pale yellowish-brown, with a central longitudinal dark brown bar in front on the upperside, followed to the spinners by five or six dark brown angular bars or chevrons and several well-marked curved oblique stripes of the same colour on the sides. Spinners short, compact, yellow-brown. Underside with three longitudinal brown lines or narrow stripes converging from the genital aperture (which is small and inconspicuous, though characteristic) to the spinners.

*Hab.* MEXICO, Omilteme in Guerrero 9500 feet (*H. H. Smith*).

## PEDO, Cambridge.

### **Pedo plorans,** sp. n.

*Adult male*, length $2\frac{2}{3}$ lines; *adult female*, length $3\frac{1}{2}$ to $3\frac{3}{4}$ lines.

*Cephalothorax* (male) deep reddish-brown, obscurely veined with black and thickly clothed with white plumose hairs.

*Eyes* of the hind-central pair smallest and distinctly further from each other than from the hind-laterals; central quadrangle longer than broad, and its anterior side rather shorter than the posterior. The height of the clypeus is about double the diameter of the fore-central eyes.

*Legs* of the first two pairs yellow; femora black-brown, clothed with white plumose hairs; two pairs of spines beneath each of the tibiæ and metatarsi. A thin scopula beneath the tarsi and a part of the metatarsi and the third and fourth pairs are deep brown; femora darkest, a small portion (scarcely an annulus) at the fore extremity of the tibiæ reddish-yellow-brown: these legs are also more or less furnished with white plumose hairs. All the legs have a small compact terminal claw-tuft, and all the femora are considerably incrassated.

*Palpi* short, dark yellow-brown. Radial joint somewhat longer and more robust than the cubital; at its outer

extremity, rather on the underside, is a not very long but strong apophysis, comprising the greater part of the side of the joint and directed downwards; its extremity is truncate, and its inner side is hollow or excavated. The digital joint is of great length, its hinder part oval, its fore part drawn out into a stoutish finger-like form. Palpal organs rather simple, consisting of a somewhat globular corneous lobe behind, its fore extremity drawn out into a corneous process which reaches quite to the extremity (underneath) of the joint.

*Falces* deep brown, pale yellowish on the inner side at the extremity.

*Maxillæ* and *labium* deep brown, pale yellow at the extremities.

*Sternum* black-brown, clothed with short white plumose hairs and (thinly) with coarse, prominent, dark, bristly ones.

*Abdomen* cylindric-oval; colour black-brown, with a longitudinal central series of angular coalescent markings or diamond-shaped bars, the outer extremities drawn out on each side into a point; two of these, one near the fore end, the other about the middle, extend over the sides slightly obliquely; the fore extremity is white, and the ends of the terminal diamond extend laterally so as to form a cincture or horseshoe-shaped band round the extremity of the abdomen. All these white markings are formed by short white plumose hairs on a pale brownish or yellow-brown ground. The underside is dark yellow-brown, thinly clothed with white plumose hairs. The spiracular plates and region of the genital aperture form a homogeneous dark yellow-brown coriaceous plate ending in a circular rugulose socket, into which the connecting pedicle is inserted.

The *female* resembles the male in colours and pattern, and the genital aperture is simple but of characteristic form. In one example of the female the tibiæ of the fourth pair of legs had a distinct yellow annulus, clothed with white plumose hairs at each end, and the abdominal markings were all pale yellow and similarly clothed, the underside being clothed only with ordinary hairs. The whole of the colouring of this example was paler than the rest.

*Hab.* Mexico, Amula in Guerrero (*H. H. Smith*).

### **Pedo lachrymosus**, sp. n.

*Adult female*, length slightly over $3\frac{1}{2}$ lines.

This species in form and general characters and appearance nearly resembles *P. ornatus*, Cambr. (anteà, p. 220), and *P. plumosus*, Cambr. (anteà, p. 242).

*Cephalothorax* deep black-brown, almost black, clothed with short, white, plumose hairs.

*Legs* of first and second pairs orange-yellow-brown, the femora black-brown; the third and fourth pairs have the femora black-brown, the genuæ, tibiæ, and metatarsi deep brown to reddish-brown, the tarsi yellow-brown.

*Abdomen* jet-black, clothed more or less with plumose hairs; the fore extremity is thickly clothed with them; a slender transverse line of white plumose hairs and another line further back run across towards the middle, and a somewhat horseshoe-shaped marking is formed by a white marginal line of the same just above the spinners, and the sides appear to have one or more oblique white lines similarly formed. The genital aperture is of characteristic form. The spinners appear as if set in a deep circular pit, but whether this is occasioned by a shrinking-in of the epidermis is not certain.

*Hab.* Mexico, Amula in Guerrero (*H. H. Smith*).

## MAZAX *, gen. nov. (fam. Drassidæ; subfam. Micariinæ).

*Cephalothorax* elongate-oval, much longer than broad, truncate at each end, the anterior end broadest; lateral marginal impressions moderate. Normal grooves and indentations obsolete. Surface of caput and thorax uniformly convex.

*Eyes* of moderate and nearly equal size, in two transverse rows; anterior row shortest, the convexity of its slight curve directed forwards, the central pair rather larger than the laterals, and further apart than from these last; the posterior row very nearly straight, the convexity of its very slight, if any, curve

* Nom. propr.

directed backwards, and its central pair of eyes rather further from each other than from the hind-laterals. Central quadrangle as broad as long, and its anterior side slightly longer than the posterior. Those of each lateral pair are separated from each other by the diameter of the hind-lateral eye. Fore-laterals smallest of the eight. The height of the clypeus slightly exceeds the diameter of one of the fore-central eyes.

*Legs* moderately long, not greatly differing in length, 4, 1, 2, 3, slender; claw-tuft and scopula absent; spines almost only beneath the tibiæ and metatarsi of the first and second pairs, where they are arranged in pairs.

*Falces* rather long, powerful, subconical, prominent at their base in front.

*Maxillæ* short, strong, broadest near their extremity, where they are truncate, rounded on the inner side, and rather inclined towards the labium.

*Labium* short, much broader than high, the sides curving to the apex, which is rather flat or truncate.

*Sternum* oval, hollow-truncate at its fore end, and slightly drawn out at its hinder end, which is truncate and only divided by a suture from the fore extremity of the coriaceous pedicle connecting the cephalothorax and abdomen. This pedicle is cylindric and of moderate length, and runs into a strong, chitinous, transversely and deeply rugulose sheath, which increases in size to the plates of the spiracles and genital aperture, with which it coalesces; just behind the posterior end of this sheath, on the upperside of the abdomen, are two strongish, curved, prominent spines, each issuing from a strongish tubercle in a transverse line just at the beginning of the abdomen, which last is short, round-oval, rather broader behind than in front; and on the fore half of the upperside is a large, convex, shining, smooth, coriaceous plate, rounded at its posterior extremity.

## **Mazax spinosa,** sp. n.

*Adult female*, rather more than 2 lines in length.

*Cephalothorax* deep yellowish-brown, thinly covered with short, grey-white, squamose hairs.

*Legs* dull orange-yellow, those of the first two pairs rather palest; femora much clouded and marked with black or black-brown; the tibiæ of the fourth pair have a broad black-brown annulus towards their fore extremity, the greater part of the metatarsi of the same pair being also black-brown; the genuæ of the third and fourth pairs are also much clouded with the same colour. The spines under the tibiæ of the first and second pairs are in three pairs, under the metatarsi in two pairs.

*Palpi* rather long, blackish-brown, and furnished with hairs and a few spines.

*Falces* dark yellow-brown.

*Maxillæ* and *labium* black-brown, whitish at their extremities.

*Sternum* deep yellow-brown.

Connecting pedicle and sheath rich deep brown.

*Abdomen* black, thinly covered with hairs, of which some are white and squamose; the coriaceous plate on the fore part of the upperside is deep brown, and has also a few white squamose hairs on it. The genital aperture is inconspicuous but of characteristic form; when quite uninjured the white squamose hairs would probably form transverse lines, of which there are still traces on the sides of the abdomen.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

This spider is of considerable interest. Being very doubtful as to its position, I submitted it to M. Simon, who refers the species to the genus *Micaria*, of which the type is *M. fulgens*, Walck.; but as it appears to me to differ from this in every essential generic character, and to find no place elsewhere, I have formed a new genus for it. *M. spinosa* is undoubtedly closely allied to, but distinct from, *Myrmecotypus*, Cambr. (anteà, p. 123, t. 18. figg. 6, 6 *a–d*), which M. Simon includes as synonymous with *Apochinomma*, Pavesi—whether rightly or wrongly I cannot say, as I have not seen an example of this latter; but M. Simon's description of that genus appears to differ in several important respects from *Myrmecotypus*.

## CORINNOMMA, Karsch.

### **Corinnomma dubium,** sp. n.

*Adult female*, length rather more than $3\frac{1}{2}$ lines.

*Cephalothorax* elongate-oval; length nearly double its breadth; truncate at each end; hinder end rather narrowest, normal grooves obsolete, thoracic indentation slight; lateral marginal impressions slight; surface not smooth, thinly covered with grey hairs; profile-line forming a nearly even curve throughout its whole length; height of clypeus rather more than the diameter of a fore-central eye. Colour deep black-brown.

*Eyes* unequal in size; fore-centrals much the largest and seated on a slight prominence, those of the posterior row forming a straight line, the centrals further from each other than from the laterals, being divided by two diameters' interval, and rather smaller; central quadrangle equal in length and breadth, but the anterior side appears to be slightly shorter than the posterior, but (owing to the large size of the anterior eyes and the narrower interval between them) this may be only apparent, so also the posterior width is apparently rather longer than the anterior. The fore-lateral eyes are smallest, and very near but not contiguous to the fore-centrals, being less than a diameter's interval apart.

*Legs* moderately long and strong, 4, 3, 1, 2, armed with spines—two pairs and a single one at the base in longitudinal series beneath the tibiæ, and two pairs beneath the metatarsi of the first pair of legs, one pair and a single one beneath the tibiæ, and two pairs beneath the metatarsi of the second pair of legs; a thin apology for a scopula beneath the tarsi and a portion of the metatarsi, and a small but compact claw-tuft beneath the terminal tarsal claws. Colour pale orange-yellow: the femora and metatarsi of the first pair, with an external longitudinal stripe on the tibiæ, mostly deep black-brown, the anterior sides of the femora of the second and third pairs, with the tibiæ also of the latter, of the same colour; the fourth pair are almost entirely black-brown to deep yellow-brown, excepting the tarsi.

*Palpi* rather long, deep brown; digital joint very long and paler than the rest.

*Falces* long, powerful, vertical, prominent in front, and of a deep brown colour.

*Maxillæ* moderately long, broad, very prominent towards the base in front, angular at the outer extremity, rounder on the inner one, just behind which they are furnished with a dense tuft of divergent hairs; colour dark brown, with pale whitish at the inner extremity.

*Labium* broader than high, the sides rather converging to the apex, which is rounded; deep brown in colour, the apex pale whitish.

*Sternum* elongate-oval, hollow-truncate at its fore extremity, double-notched at its posterior one; dark brown, thinly clothed with coarse grey hairs.

*Abdomen* elongate-oval, rather stoutest at its posterior extremity, and connected with the cephalothorax by a short but distinct pedicle fitting into a coriaceous sheath or circular socket at the fore end, which is rugulose, deep brown, and homogeneous with the spiracular plates. The abdomen is black in colour, thinly clothed with grey hairs; over the middle is a pale narrow stripe intensified by grey hairs, and two other short, parallel, transverse, pale bars a little way above the spinners similarly clothed with grey hairs; on each side towards the fore end is a broad oblique yellowish bar, extending a little over the underside, with a spot of the same colour a little way behind it. Spinners short, compact, the inferior pair strongest; just in front of them is a convex semicircular prominence, with a distinct lip at its posterior elevated margin, and clothed thickly with short bristles; no doubt this is the entrance to a spiracular organ. Genital aperture of characteristic and distinctive form.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

### **Corinnomma pilosum,** sp. n.

*Adult male and female*, length slightly over $2\frac{1}{3}$ lines.

In general form and structure this spider very nearly resembles *C. dubium*. The cephalothorax, however, is a little narrower, its length being slightly over double its breadth, but its anterior extremity is broader in proportion to the breadth of the posterior. The lateral marginal impressions at the caput

are moderate, a little stronger than in *C. dubium*; the oblique indentations denoting the lateral junctions of the caput and thorax are represented by merely a very slight, but perceptible impression; in neither sex was there any trace of the normal median indentation at the junction of the caput and thorax. The cephalothorax is of a dark brown colour, covered with short grey hairs and long prominent pale ones of a bristly nature.

*Eyes* very nearly as in *C. dubium*, but the posterior row has a very slight curve whose convexity is directed forwards, and the central quadrangle is more nearly square, its anterior side, however, appears to be slightly longer than the posterior.

*Legs* pale yellow, marked nearly the same (though perhaps more distinctly striped in appearance), with dark brown or blackish, as in *C. dubium*. The spines, however, are longer, and there are three pairs in the series beneath the tibiæ of the first pair of legs. The relative proportion of the legs appears to be the same as in *C. dubium*, 4, 3, 1, 2.

*Palpi* ( ♂ ) moderately long, dark brown; digital joint paler; cubital and radial joints short, the latter strongest, and with several spine-like bristles on the upperside, but no apophysis on the outer side at the extremity. The digital joint is very long, narrow-oval, almost cylindrical, greatly exceeding in length that of the radial and cubital joints together. The palpal organs are well developed but simple, consisting of a roundish corneous lobe drawn out at its fore extremity nearly to the end of the joint, and terminating with a black, sharp-pointed, somewhat corkscrew-shaped spine just beneath the tip of the joint.

The *falces* are similar to those of *C. dubium* and of a deep brown colour.

The *maxillæ* are rather longer than in *C. dubium* and not quite so rounded on their inner extremities. Colour dark blackish-brown, with pale whitish on the inner margin and extremities.

*Labium* broader than long, though the actual base is about equal to the width of the apex, the sides being strongly rounded; apex truncate, with the corners rounded off. Colour blackish-brown, with pale whitish apex.

*Sternum* elongate-oval, truncate in front, and its sides towards the posterior extremity opposite the coxæ of the third pair of legs very strongly emarginate. It is blackish-brown in colour, clothed with a few long coarse hairs.

*Abdomen* short, somewhat oval, narrow in front, broad behind. It is blackish in colour, clothed with pale hairs, and more thinly with long prominent bristles; on the fore extremity of the upperside are two long, curved, tapering spines in a transverse line directed backwards, and two more in front of them closer together but less long and strong. The short pedicle connecting the thorax and abdomen has a kind of protecting sheath in the slight production of the hinder extremity of the thorax, and the abdomen has a rugulose coriaceous sheath at its fore extremity. Spinners as in *C. dubium*, but apparently set in a circular pit or sheath; the transverse prominence and lip close in front of the spinners is of a more pronounced character than in that species, and between this and the inferior spinners is a well-marked colulus of a triangular form.

The *female* resembles the male in form, colours, and general appearance. The genital aperture is very simple in form but characteristic.

The grey and white hairs clothing various portions of this spider, as well as of *C. dubium*, are, when seen through a microscope, plumose.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

Mr. Smith has the following note on this species:—"Female in a leaf, in thick woods near a stream; it was sitting on the point of the leaf with the front legs extended. A black ant resembling this spider is common in the same woods. According to my observations, these ant-like spiders eat only the species of ant which they resemble. A specimen of this spider was found in a shady glen, in a thickish silken nidus on a leaf."

## STORENA, Walckenaer.

### **Storena lauta,** sp. n.

*Adult female*, length 3 lines.

This species is of normal form and structure.

The *cephalothorax* is of a dark rich reddish-brown colour, smooth; much longer than broad, of an oblong-oval form, roundly truncate in front, very convex above; normal indentations (excepting the thoracic one) obsolete, and the profile-line forming a strong and regular curve; the lateral marginal impressions at the caput are moderate. Clypeus rather prominent and rounded, exceeding considerably in height half that of the facial space.

*Eyes* rather small, subequal; in two transverse, equally curved rows, the convexity of the curve directed backwards, the anterior row much the shortest; central quadrangle longer than broad, and the fore side shorter than the hinder one; the hind-central pair are much nearer to each other than to the hind-laterals, being separated by less than a diameter; each lateral pair with the hind-central eye next to it forms nearly an equilateral triangle, or at any rate an isosceles triangle whose base is the line formed by the lateral pair. The fore-central eyes are smallest, and nearer together than to the fore-lateral eyes.

*Legs* not very long nor strong, 4, 1, 2, 3, armed with spines, chiefly on the third and fourth pairs; on the genuæ of these pairs are two spines on the outer side and another at the posterior extremity near the outer side; terminal tarsal claws three, destitute of scopula and claw-tuft. Colour reddish-orange-yellow.

*Palpi* similar to the legs in colour.

*Falces* moderately long, powerful, rounded in front, somewhat directed backwards, red-brown, and furnished in front with short coarse bristles.

*Maxillæ* short, strong, somewhat pointed at their inner extremities and much inclined to the labium. Colour yellow-brown.

*Labium* slightly broader than high and rounded at the apex. Colour dark reddish-yellow-brown.

*Sternum* short-oval, broadly truncate in front, produced into a short rather fine point behind, between the coxæ of the fourth pair of legs, which are almost contiguous to each other.

*Abdomen* oval, fore margin rounded, rather broadest a little past the middle. It is black in colour on the upperside, thinly clothed with coarse prominent hairs, and with a large inverted **V**- or **U**-shaped white bar at the fore end occupying a third of the length of the abdomen; following this backwards are three pale angular bars or chevrons, with a more or less strong, oblique, pale bar at the hinder end of each, reaching to the spinners, and following the last chevron is a conspicuous, white, somewhat elongate, triangular patch; the sides and underside are pale dull luteous; near the spinners the sides have two or three oblique black streaks; the underside is marked with four irregular, longitudinal, black markings, and another transverse angular one a little way in front of the spinners; these are compact, orange-yellow, the inferior pair longer and stronger than the superior. The genital aperture is inconspicuous, but of characteristic form.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## RUBRIUS, Simon.

### **Rubrius mordax,** sp. n.

*Adult female*, length $4\frac{1}{2}$ lines.

*Cephalothorax* longer than broad, truncated in front; lateral marginal indentations at the caput tolerably strong and abrupt. Colour reddish-yellow-brown, paler on the lateral margins; two broad, longitudinal, well-defined, yellow-brown bands, one on each side, having a marginal pale reddish-yellow border of more than half its width, and a central one of a deeper hue, broader before than behind, and longitudinally bisected by a deep brown line which ends just behind the hind-central pair of eyes. The profile curves over to the ocular area from the hinder slope, which is rather short and tolerably steep, at about an angle of 45°. The cephalothorax is clothed with short fine hairs. Height of the clypeus less than half that of the facial space.

*Eyes* in two transverse rows, rather closely grouped; posterior row very nearly straight, the convexity of its

slight curve directed backwards; anterior row shortest and the convexity of its curve slight and directed forwards. The eyes are subequal, the fore-laterals slightly the largest and separated from the hind-laterals by nearly a diameter's interval. The central quadrangle is longer than broad, and its anterior slightly shorter than its posterior side. The interval between the hind-centrals is greater than between each and the hind-lateral next to it, exceeding a diameter, while the fore-centrals are nearer to each other than to the fore-laterals.

*Legs* moderately long, rather strong, 4, 1, 2, 3, furnished with numerous, mostly short, fine hairs and short spines; some of these are in a longitudinal series of pairs beneath the tibiæ and metatarsi of the first pair, four pairs on the former, three on the latter, no series of pairs beneath the tibiæ of the second pair of legs, only three single spines along the outer margin, and a pair, transverse, at the fore extremity; a thin scopula beneath the tarsi, and a very slight claw-tuft beneath the terminal claws, which are three in number, the inferior ones slender and not easy to see. Colour of the legs orange-yellow-brown, with some faint dusky annulations on the femora, but not quite running round the joint.

*Falces* tolerably long, powerful, rather prominent in front. Colour red-brown.

*Maxillæ* moderate in length and strength, enlarged at the extremity, where they are convex, and rounded on the outer, and rather obliquely truncated on the inner sides. Colour orange-yellow-brown.

*Labium* oblong, more than half the length of the maxillæ, and truncate at the apex; darker in colour than the maxillæ.

*Sternum* as broad as long, similar in colour to the legs, nearly round, a slight prominent point only at the middle of the hinder extremity, and two smaller points opposite the insertions of the third pair of legs. The inner edges of the coxæ of the fourth pair are nearly but not quite contiguous.

*Abdomen* oval, of ordinary form; rather broader behind than in front, clothed with very short fine hairs. Colour yellow-brown, closely marked with deep brown and black; a patch at the middle near the fore margin is more distinctly marked with several short, longitudinal, black stripes, and from near the middle to above the spinners is a series of three or four indistinct pale angular bars or chevrons. The sides are marked with black disposed in oblique lines. The underside is yellow-brown, marked with several transverse, parallel, black lines or bars. Spinners short, compact; inferior pair longest and strongest. Genital aperture rather large and of characteristic form.

*Hab.* MEXICO, Omilteme in Guerrero 7000 to 9000 feet (*H. H. Smith*).

## EPEIRA, Walckenaer.

### **Epeira smithi,** sp. n.

*Adult female*, length rather over 5 lines; length of abdomen over 4 lines, breadth of ditto 4 lines.

This spider belongs to the group of which *Epeira sollers*, Walck., may be taken as the type.

The *cephalothorax* is of the normal form; deep black-brown in colour, thinly clothed with coarse grey hairs.

*Eyes* subequal; those of the central group form a quadrangle, whose anterior side is considerably longer than the posterior side, and its eyes are larger than the hind-centrals, these last with the two fore-lateral eyes form a straight transverse line. The interval between the hind-centrals is rather less than half a diameter; the eyes of each lateral pair are contiguous to each other and placed slightly obliquely.

*Legs* not very long, 1, 2, 4, 3, moderately robust; colour black, a broad bright yellow-orange annulus towards the hinder part of all the tibiæ, the whole of the metatarsi and tarsi of the first and second pairs of legs are also bright yellow-orange; the metatarsi of the third and fourth pairs have a black annulus at their anterior extremity. The legs are furnished with a few, neither very long nor strong, spines.

*Palpi* similar in colour to the legs.

*Falces* moderate in length and strength, and similar to the cephalothorax in colour.

*Maxillæ* and *labium* of normal form; colour black, their extremities margined with whitish.

*Sternum* black-brown, with a longitudinal, median, somewhat arrow-shaped, dull orange-yellow marking.

*Abdomen* large, short, broad-oval, length and breadth very nearly equal, round in front, round-pointed behind. On the upperside the anterior portion is black, the rest yellowish-mouse-brown; the black part is divided from the rest by a transverse whitish irregular or somewhat dentated line, broken in the middle—on each side of the middle it is brightest, most conspicuous, and of a curved form; towards each side of the median line of the middle and hinder part are some irregular black-brown patches, leaving a strongly dentate

longitudinal central mouse-brown marking clothed with short grey hairs; the fore part of this marking is much the broadest; the sides are marked with two or three oblique broken black lines, and the lower portion of the sides is black, marked with short, horizontal, pale yellow-brown spots and dashes. Underside black, broadly margined with yellow-brown; the posterior extremities of the marginal border narrowest, and ending on each side in a square yellow-white spot very near the spinners. The genital aperture and process are small, but characteristic, much resembling (though less strong) those of *Epeira diadematа*, Clk. Close behind this is a transverse oblong white patch or spot.

*Hab.* MEXICO, Orizaba (*H. H. Smith*).

## CESONIA, Simon.

*Helvidius*, Cambridge, anteà, p. 220 (1896).

### **Cesonia fugax**, sp. n.

*Adult female*, length 4½ lines.

In general form and appearance this spider nearly resembles *C.* (*Helvidius*) *lugubris*, Cambr. (anteà, p. 221); it is, however, of a generally browner hue and less strikingly marked.

The *cephalothorax* is yellow-brown, the sides marked with black converging lines and markings, two of the latter in the form of elongate irregular spots, these being side by side at the occiput. A fine black line borders the thorax, and immediately above it is a narrow bordering band of white hairs. A longitudinal, ill-defined, narrow, central stripe runs from the eyes to the hind margin, and is of a paler yellow-brown colour than the rest, thinly clothed with grey hairs.

The *eyes* appear to be subequal, and form a large quadrangle, whose posterior side is longer than the others by the length of the line formed by the hind-central and hind-lateral eye (at each side of the posterior row). The curve of the posterior row is very slight, and its convexity is directed backwards. The hind-centrals are separated by two diameters' interval, and from the hind-laterals by less than a diameter. The fore-centrals are separated from each other by a little over a diameter, and from the fore-laterals by less than half a diameter. The height of the clypeus is less than a third of the facial space.

*Legs* rather short, strong, 4, 1, 2, 3, of a yellow-brown colour, darkest above, furnished thickly with hairs and spines.

*Maxillæ* of normal form; yellowish in colour, with a distinct, oblique, dark yellow-brown stripe across them.

*Labium* yellowish, with a submarginal, narrow, well-defined, dark yellow-brown border.

*Sternum* dark yellow-brown.

*Abdomen* elongate-oval, rather truncate in front and obtusely pointed behind; upperside dark brown, blackish near the front, and marked with two longitudinal pale yellowish-white stripes—one on each side of the median line, slightly diverging as they run backwards, and widening suddenly on the inner sides a little above the spinners; from the anal prominence a longitudinal row of small, close-set, yellowish spots runs upwards to the extent of the widened portion of the yellowish stripes—three dark brown longitudinal stripes are thus formed, the central one strongest, and below each lateral brown stripe is an irregular pale yellowish one. The underside is pale yellowish-brown. Spinners blackish, the terminal joint of the superior pair pale. The genital aperture is small, but differs a little in form from that of *C. lugubris*.

*Hab.* MEXICO, Amula (*H. H. Smith*).

## PRONOUS, Keyserling.

*Paphlagon*, Cambridge, anteà, p. 117 (1893).

### **Pronous tuberculifer**, Keys.

*Pronous tuberculifer*, Keys. Verh. zool.-bot. Ges. Wien, xxx. p. 548, t. 16. fig. 1 (1881).

*Paphlagon beatus*, Cambr. anteà, p. 117, t. 14. figg. 10, 10 *a–e* (♀).

The female only of this spider was described, *l. c. anteà*. The male differs considerably in colours and markings;

it appears, therefore, worth while to give a description and figure of it from a well-preserved example since found in Mr. H. H. Smith's Teapa collection. The conical eminences on the abdomen, conspicuous in the female, are but slightly developed in the male, most of them being obsolete.

The *cephalothorax* (male) is of a dark reddish-yellow-brown colour, with an ill-defined pale yellowish-brown longitudinal central band; its surface is thickly marked with minute roundish punctures and covered with short greyish hairs. The legs are dull reddish-yellow-brown, furnished with fine spines. The abdomen is of a rather narrow oblong form, rounded before, obtusely pointed behind, and rather broadest in front; the upperside is yellowish, with a somewhat zigzag, broadish, longitudinal, blackish-brown band on each side of the median line, these becoming coalescent above the spinners, a little way above which is a series of well-defined, yellowish, short, transverse angular bars or chevrons; along the lower part of each side is a broader, longitudinal, irregular, black-brown band; the underside is yellowish, with a blackish blotch in the middle. On each side of the spinners are two distinct yellowish spots.

The *palpi* are short, the digital joint of moderate size, and the palpal organs prominent and rather complex.

*Hab.* MEXICO, Teapa in Tabasco (*H. H. Smith*).

## SCOLODERUS, Simon.

*Carepalxis,* Cambridge, anteà, pp. 48, 49 (ad partem).

### **Scoloderus gibber,** sp. n.

*Carepalxis americana,* Cambr. anteà, p. 49 (ad partem) (♀).

The spider described (*l. c. suprà*) as the male of *C. americana* appears to belong to a female more recently discovered, and distinct from the female of *C. americana,* though the two species are very nearly allied.

*Adult female,* length slightly over 2 lines; length of male $1\frac{1}{4}$ lines.

*Cephalothorax* of an orange-reddish-yellow-brown colour. Caput large, obtuse, occiput gibbous and a little prominent backwards, divided by a well-marked indentation from the thorax, with which, however, the profile has a general steep slope. The caput and most of the thorax are covered with minute granulations and coarse white hairs.

*Eyes* in normal position. The central quadrangle is broader than long, and its posterior side longer than the anterior; the posterior eyes are also larger than the anterior. The height of the clypeus is equal to half that of the facial space. The eyes of each lateral pair are very near together, but not contiguous, the anterior is the largest; when looked at from in front and above the four eyes of the anterior row form a slight curve, whose convexity is directed backwards.

*Legs* similar in colour to the cephalothorax. The femora rather darkest, not flattened in any of the joints, and devoid of spines, excepting two or three at the extremity, the longest directed inwards near the fore end. The hairs are mostly white and coarse.

*Falces* strong, straight, similar to the legs in colour; furnished in front with coarse granulations and whitish hairs.

*Labium* broader than high, of a somewhat semicircular form, the apex being rounded.

*Abdomen* broad-oval, but not elevated, in fact nearly round; looked at from behind, there is scarcely a suspicion of gibbosity at each of the fore corners, which are well rounded. The general colour is dull whity-brownish, with an elongate, longitudinal, pale marking at the middle of the fore extremity, and behind it a transverse row of more obscure pale spots; at the middle of the upperside are four conspicuous, black, round spots with yellowish margins in a quadrangle, whose anterior is shorter than the posterior side. The sides have some oblique, obscure, darker dashes or lines, whose finer ends are directed upwards. The genital aperture is small, but distinctive in form.

In the male (which is conjectured to be that of the female above described) the caput is broader at the occiput and its hinder slope less abrupt, the indentations between the caput and thorax being less deep, and consequently the sides and posterior side of the caput and thorax run more nearly in an even line. The tibiæ of the first and second pairs of legs are covered with spines, those of the second pair being short but strong, and three of them form a longitudinal line on the inner side of the posterior half.

*Palpi* short, radial joint somewhat nodose, digital joint short-oval, with a crooked pointed small process at its

hinder extremity directed outwards. Palpal organs well developed, rather prominent, but not very complex. In other respects the male does not differ notably from the female; the legs, however, are of a less bright and rich hue, and the underside of the abdomen is suffused with dark brown, and its fore corners above are a little more decidedly prominent.

*Hab.* MEXICO, Atoyac in Vera Cruz (*H. H. Smith*: ♀); PANAMA, Bugaba (*Champion*: ♂).

## MEMNON *, gen. nov. (fam. Drassidæ; subfam. Anyphæninæ).

Nearly allied to *Wulfila*, Cambr. (anteà, p. 158).

*Cephalothorax* broader than long, but not greatly so, broadly truncated in front; lateral marginal impressions at the caput slight; upper convexity moderate; thoracic indentation shown by a red-brown line.

*Eyes* of tolerable size; posterior row moderately curved, the convexity of the curve directed backwards. Eyes of the posterior row of equal size and equally separated; those of the anterior row (which is much the shortest) of unequal size, the central pair being no more than half the size of the laterals, which are the largest of the eight. Anterior row also slightly curved, its convexity directed forwards. The fore-centrals are further from each other than from the fore-laterals, being, however, less than a diameter's interval apart. The fore-laterals are rather less than a diameter from the hind-laterals. The line formed by the hind-centrals is equal to that formed by each of them and the fore-central opposite to it. The height of the clypeus is scarcely equal to the diameter of one of the fore-central eyes; central quadrangle equal in length and posterior breadth, but the anterior side much the shortest.

*Legs* moderate in length and strength, 4, 1, 2, 3; 1 and 4 almost equal. Spines rather long, moderately strong; a thin scopula beneath the tarsi and fore part of the metatarsi of the first and second pairs. Claw-tuft beneath the two terminal claws.

*Falces* strong, straight, rather long, projecting forwards, slightly divergent, furnished near the extremity (rather beneath the inner edge) with numerous strong sharply-curved bristles of an almost spinous character.

*Maxillæ* long, strong, straight, three parts as long as the sternum, broadest at the extremities, where they are rounded on the outer end and obliquely truncated on the inner side.

*Sternum* oval, much longer than broad.

*Labium* more than half the length of the maxillæ, oblong; marginal lines rather curved; apex truncate, but slightly hollowed in the middle.

*Abdomen* oval, pointed behind and round-pointed before. The transverse spiracular opening underneath is rather conspicuous, semicircular, and placed halfway between the middle and the genital aperture, which is of very characteristic form. Spinners short, compact, the superior and inferior pairs of equal or nearly equal length.

### **Memnon peragrans,** sp. n.

*Adult female*, length 4 lines.

*Cephalothorax* orange-yellow, clothed with short grey and other hairs; ocular region strongly suffused with deep red-brown; a longitudinal band of red-brown on each side running backwards from the outer ends of the ocular area and curving at the hinder extremities, where they nearly unite.

*Legs* orange-yellow, rather lighter in hue than the cephalothorax; broadly and distinctly, but not closely, annulated with dark red-brown.

*Falces* deep shining rich brown, marked on their fore sides obscurely with two longitudinal lines of a deeper hue.

*Maxillæ* dull orange-yellow on their outer sides, but browner on the inner.

*Labium* dark yellow-brown.

*Sternum* orange-yellow, with a broad, central, longitudinal, deep reddish-brown band, slightly or bluntly

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* Nom. propr.

dentate on the margins and narrowest at the posterior extremity, and with a slender broken marginal line of the same colour.

*Abdomen* dull brownish-yellow on the sides and underneath; the upperside is of a warm purplish-brown, with an irregular longitudinal central marking of the same hue as the sides; on this marking is a short central stripe of purple-brown at the fore end, and traces of the normal angular bars of a pale brownish-yellow towards the spinners, and on each side of the middle there is an elongate, longitudinal, wedge-shaped bar of a deeper purple-red-brown hue than the rest, the point of the wedge directed forwards; there is a space also of a similar deep hue for a little way above the spinners. The latter are short, black, with a pale patch at the bases underneath; the superior pair are very slightly longer than the inferior pair. On the underside, including the genital aperture and transverse spiracular opening, is a broadish, longitudinal, central deep red-brown stripe, reaching from end to end.

*Hab.* GUATEMALA (*Sarg*).

## MENALIPPE *, gen. nov. (fam. Drassidæ; subfam. Liocraninæ).

*Cephalothorax* longer than broad, upper convexity moderate; thorax well rounded on the outer margins; lateral marginal impressions at the caput rather strong; fore part of caput broad and slightly curvi-truncate; profile-line of upperside level; thoracic indentation rather long, narrow.

*Eyes* in two transverse rows, slightly curved, the posterior row slightly longest; the convexity of the curve of the posterior row directed backwards, that of the anterior row, which is strongest, forwards; looked at in profile, the convexity of the anterior row is directed upwards. Eyes of the posterior row equally separated; the centrals of this row are rather smaller than the laterals, and there is less than one and a half diameters' interval between them. The four centrals form a square whose posterior side is a little, but distinctly, shorter than the anterior; the fore-central eyes are considerably the largest of the eight, and the fore-laterals a little the smallest. The interval between the fore-centrals is about half a diameter, and each is distinctly nearer to the fore-lateral eye on its side. Those of each lateral pair are about one-fourth of a diameter of the hinder one from each other, this interval being equal to that which separates the fore-centrals from the fore-laterals. The height of the clypeus is about equal to the diameter of the fore-central eyes.

*Legs* rather long, not differing greatly in length, 4, 1, 2, 3, moderately strong. Spines rather long, five pairs in two longitudinal parallel rows beneath the tibiæ of the first, and four pairs beneath those of the second pair of legs; two pairs also beneath the metatarsi of the first and second pairs of legs; also one or two lateral spines on the inner side of these metatarsi; a thin scopula beneath the tarsi and the anterior portion of the metatarsi of all excepting the fourth pair. A compact claw-tuft beneath all the terminal tarsal claws.

*Falces* strong, very prominent and rounded in front; a prominent round-edged ridge close to the base on the outer side underneath the fang, and behind it a strong conical tooth, behind which again there appears to be another smaller tooth, as well as two or three others on the inner margin. (All these teeth are on the margins of the fang-groove.)

*Maxillæ* moderately long, slightly inclined to the labium, a little widened at the fore extremity, where the outer corner is rounded and the inner one somewhat obliquely truncated. This part is furnished thickly with long bristly hairs.

*Labium* broader than high; a portion at the base divided from the rest by a strong transverse suture or indentation; upper corners rounded and furnished with strong curved bristles directed inwards; apex rather hollow-truncate.

*Sternum* short, broad, heart-shaped, a little longer than broad; fore margin truncated in a scalloped line; posterior extremity short, blunt-pointed.

*Abdomen* elongate-oval; underneath, close in front of the spinners, is a small but distinct obtusely-angular, pointed, chitinous red-brown lip covering the entrance to (no doubt) a spiracular organ; and between this and the base of the inferior spinners is the colulus, well-defined, subconical, and furnished with hairs like the rest of the abdomen.

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* Nom. propr.

## **Menalippe punctigera,** sp. n.

*Adult female*, length $4\frac{2}{3}$ lines.

*Cephalothorax* orange-reddish yellow-brown; surface thickly covered with minute punctures or pock-marks, most strongly on the caput and sides of the thorax, and furnished thinly with short, fine, pale hairs; a deep brown, jagged-edged, or somewhat zigzag stripe runs from each hind-lateral eye backwards to the posterior extremity, and a narrow angulated stripe runs round each lateral margin; the thoracic indentation is marked by a deep red-brown line, and from each hind-central eye a short brown streak runs backwards.

*Falces* dark red-brown, furnished in front with strong bristles.

*Maxillæ* and *labium* yellow-brown.

*Sternum* dull orange-yellowish, the middle being palest.

*Legs* dull brownish-yellow; tibiæ and metatarsi of the third and fourth pairs very faintly annulated with brown.

*Palpi* like the legs in colour; digital joint long, slightly claviform, furnished with slender spines; on the outer side, rather underneath the humeral joint, is a longitudinal row of slender, spiniform, curved bristles.

*Abdomen* dull whity-brown, very thickly clothed with short fine hairs; a broad, longitudinal, irregular, black-brown band runs backwards on each side of the upper surface. On the fore-half of the space between these two bands are two short, longitudinal, reddish-brown bars, and following them are several dark brown angular bars or chevrons in a longitudinal line, the anterior ones broken at the apex. The sides and underside are similar in colour to the ground-colour of the upperside. Spinners pale dull yellowish, short, compact, the four outer ones about equal in length; the inferior pair are a little the stoutest; the superior and middle pairs are each furnished with several strongish distinct spinning-tubes or spinnerets, the inferior pair being without them. Genital aperture rather large and of very characteristic form.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## MELPOMENE*, gen. nov. (fam. Agelenidæ; subfam. Ageleninæ).

Closely allied to *Agelena*, Walck.; differs in the narrow cephalothorax, whose lateral margins at the junction of the caput and thorax are less impressed. The lateral eyes of the anterior row are considerably larger than the centrals, the rest subequal. The labium is as wide as it is long. The abdomen is long, narrow, almost cylindrical; the inferior pair of spinners are separated at their base by nearly a diameter's interval, and the terminal joint of the superior pair is nearly, if not quite, double the length of the basal joint.

## **Melpomene elegans,** sp. n.

*Adult male*, length 5 lines; length of cephalothorax 2 lines, breadth $1\frac{1}{2}$ lines.

*Cephalothorax* rather dark yellow-brown, with short darker converging lateral lines; a broadish, lateral, well-defined, marginal, yellow band on each side, clothed with grey hairs, and a longitudinal, central, less well-defined, narrow, yellowish stripe similarly clothed and running nearly through the ocular area.

*Eyes* as in *Agelena* in general position; central quadrangle longer than broad, and its fore side slightly shorter than the hinder one; the interval between the hind-centrals is very nearly a diameter, that between the fore-centrals much less.

*Legs* long, rather slender, 4, 1, 2, 3, furnished with long hairs (many of which are grey) and a few slender spines. Colour yellow-brown, obscurely annulated with a paler hue; a broad dark brown annulus at the fore end of each of the tibiæ.

*Palpi* short, similar to the legs in colour, and furnished with grey and other hairs. Cubital and radial joints short, but of about equal length. The former is slightly prominent at the fore extremity on the upper-side, where it is furnished with a very long, strong, tapering, spiniform bristle directed forwards, and a

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* Nom. propr.

shorter one from the base of the joint. The radial joint is of a darker hue, furnished with longish, coarse, grey hairs and long, tapering, spine-like bristles of different lengths and strength; its fore extremity on the outer side appears to be a good deal excavated and broken, but presents no very distinct apophyses. The humeral joint has two short curved spines at its fore extremity on the upperside. Digital joint of great size and length, the anterior portion drawn out into a longish finger-like termination; it is clothed with long coarse hairs, grey and others, and a few spiniform bristles beneath the fore extremity. Palpal organs highly developed, very prominent and somewhat complex. Figures only can give any clear idea of their form and structure.

*Falces* rather long, moderately strong, tapering, straight, and of a deep yellow-brown colour.

*Maxillæ* short, straight, slightly inclined to the *labium*, which is as broad as long, or perhaps slightly broader, and rather more than half the length of the maxillæ. The colour of these parts is yellow-brown.

*Sternum* oval, its posterior extremity ending in a short point between the coxæ of the fourth pair of legs. The central portion is dark brown, with a pale yellow-brown spot in the middle; the broad margins are pale yellow-brown, clothed with grey pubescence.

*Abdomen* elongate, almost cylindric; a broad, longitudinal, central (somewhat dentated on its posterior half), slightly tapering band of a greyish foxy hue, deepening into blackish in front, and laterally bordered with pale, dull whitish-yellow, most continuously forwards; on each side of this band, and on the sides of the abdomen, the colour is black-brown. The underside is a dull brownish-yellow, marked with two longitudinal nearly parallel, broken, black-brown lines. Spinners long, yellow-brown; the length of the inferior pair is slightly greater than that of the basal joint of the superior pair, the terminal joint of this last pair being double the length of the basal and slightly tapering.

*Hab.* MEXICO, Cuernavaca in Morelos (*H. H. Smith*).

## CASTIANEIRA, Keyserling.

*Pedo,* Cambridge, anteà, p. 219 (1896).

It seems certain that the genus *Pedo*, Cambr., is identical with *Castianeira*, Keys. The species, therefore, described by me (*P. ornatus*, anteà, p. 220, *P. plumosus*, p. 242, *P. florans*, p. 274, and *P. lachrymosus*, p. 275) must be transferred to the latter genus. Also, if the spider described by Dr. Thorell [Ann. Mus. Genova, xvii. p. 216 (1881)] as *Corinna plumosa*, from Ternate, be, as M. Simon thinks, a *Castianeira*, the name given to the species described by me, anteà, p. 242, must be changed to *C. plumigera*.

### Castianeira flebilis, sp. n.

*Adult female*, length rather over $3\frac{1}{2}$ lines.

*Cephalothorax* of normal form; deep (slightly reddish) brown in colour, thinly clothed with short, white, plumose hairs.

*Eyes* generally normal, those of the posterior row equally separated.

*Legs* moderately long, 4, 2, 1, 3, tolerably strong, especially the femora, which are of a rather deeper brown colour than the cephalothorax, and covered with short, white, plumose hairs; the rest of the first two pairs is pale yellow, but of the third and fourth pairs more or less dark yellow-brown; two pairs of spines beneath each of the metatarsi and tibiæ of the first pair of legs, while beneath the tibiæ of the second pair there are only two spines in a longitudinal line towards the outer side of the posterior half.

*Palpi* yellowish; humeral jointdeep brown.

*Falces* conical, strong, moderately long, convexly prominent near their base in front (where they are furnished with strong bristly hairs), and similar in colour to the cephalothorax.

*Maxillæ* and *labium* yellow-brown tipped with white.

*Sternum* like the cephalothorax in colour, indistinctly radiated with a lighter hue, and furnished with short white and longer dark lines.

*Abdomen* oval; upperside black, with a tapering, longitudinal, central band or stripe on the fore part, ending in a sharp point, and covered with white hairs; at its fore extremity this band is deeply and sharply notched on each side, having on each side two prominent angular points; following close to its posterior extremity is a longitudinal series of three short, transverse, united, angular, white bars, and a horseshoe-shaped white line or stripe partly encircling the abdomen just above the spinners; this last (horseshoe) stripe seems to be characteristic, in some form or other, of most of the species known to me of the genus. The sides of the abdomen are similar in colour to the upperside, softening into the yellow-brown hue of the underside, the largest part of which, in a somewhat quadrate form, is covered with short grey hairs. On each side of the abdomen at the fore extremity are two not quite united pale patches, covered with white hairs, in a longitudinal line. The spiracular plates and the adjacent surface are of a homogeneous nature, forming a socket to the connecting pedicle, of a yellow-brown colour. Spinners yellow-brown. The genital aperture has the same general form as other allied species, but is characteristically distinct. The grey and white hairs on this spider appear to be all plumose.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## **Castianeira luctuosa,** sp. n.

*Adult female*, length slightly over 3 lines.

General form and structure normal.

*Cephalothorax* deep yellow-brown, thinly clothed with white hairs.

*Eyes.* General position normal, but the length of the anterior side of the central quadrangle appears to be equal to that of the posterior side; and the eyes forming the latter are distinctly further from each other than from the laterals of the same row.

*Legs* 4, 1, 2, 3; femora dark yellow-brown, thinly clothed with grey hairs; the rest of the first and second pairs yellow; the tibiæ of the fourth pair have a yellowish annulus at each extremity clothed with white hairs; the metatarsi deeper brown than the femora, and the tarsi dull pale yellow-brown. The tibiæ, tarsi, and metetarsi of the third pair are yellow-brown. The spines beneath the tibiæ of the first pair are 5 in number (2, 2, 1), and beneath those of the second pair 4—two on each side, though not quite in pairs; those beneath the first and second tibiæ are in two pairs.

*Falces* strong, convexly prominent in front, and similar in colour to the cephalothorax.

*Maxillæ* and *labium* yellow-brown, tipped with yellowish-white.

*Sternum* yellow-brown, palest along the middle.

*Abdomen* oval, broadest towards the hinder part. Upperside black, with a series of four transverse pale bars or markings on the fore half clothed with white hairs; the two foremost are broad and just connected at the middle, the second the longer of the two, both being nearly equal in length to the breadth of the abdomen at that part; next behind these is a much slenderer bar and somewhat curved, the convexity of the curve directed backwards, or, rather, it is composed of two slightly curved short bars almost united at their inner ends; immediately behind this, again, is a similar but much longer, slightly curved transverse bar or stripe, of which the inner ends unite in a small angular point in the middle directed forwards, and the outer ends fall over the side of the abdomen and unite with a strong, oblong, white spot or patch of the same kind; in front of this, on each side of the fore extremity, is a somewhat triangular patch of a similar kind. Just above the spinners the end of the abdomen is partly encircled by a horseshoe-shaped bar, very similar to that of some other species, and halfway between it and the long transverse bar at the middle of the abdomen are two small white spots wide apart in a transverse line. Spinners dull yellow-brown, tipped with paler. Underside marked by an oblong area broadest in front (occupying nearly the whole of it), and of a warm yellow-brownish hue. Genital aperture much resembling that of others of the genus, but still characteristically different. The spiracular plates and socket of pedicle are of a slightly reddish-yellow-brown colour. As in other species, the white hairs are plumose.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

### **Castianeira lugens,** sp. n.

*Adult female,* length $2\frac{1}{2}$ lines.

*Cephalothorax* black-brown, thinly clothed with white plumose hairs; femora of the legs black, similarly clothed, and also with other hairs; the rest of the legs of first and second pairs pale but clear orange-yellow. Genuæ and tibiæ of third pair yellow-brown; genuæ, tibiæ, and metatarsi of fourth pair dark yellowish-brown, the tibiæ with a yellow annulus clothed with white hairs at each extremity; tarsi and metatarsi of third, and tarsi of fourth, pairs yellow. Palpi yellow, the humeral joint black-brown. Two pairs of spines beneath each of the metatarsi and tibiæ of the first pair of legs, and two spines, longitudinally placed, beneath the tibiæ of the second pair, and two pairs beneath the metatarsi of the same. Relative length of legs 4, 1, 2, 3.

*Eyes* normal; the two centrals of the posterior row separated by considerably more than a diameter's interval, and further from each other than from the hind-laterals; anterior side of central quadrangle shorter than the posterior.

*Falces* similar in colour to the cephalothorax.

*Maxillæ* dark brown, broadly and obliquely whitish-yellow on the inner side.

*Labium* dark brown; apex whitish-yellow.

*Sternum* black-brown.

*Abdomen* oval, well rounded behind, the pedicle connecting it with the cephalothorax very short, making the two ordinarily sessile; colour of upper part and sides black or black-brown; a transverse pale slightly curved bar near the fore extremity, followed by another at the middle traversing the upper part and sides also; this is succeeded by three or four others much shorter, diminishing to a mere spot close above the normal pale horseshoe bar; this last marking is just above the spinners, and is of a somewhat subquadrate form. The above pale markings are clothed with greyish-white plumose hairs. The underside is of a warm (slightly reddish) brown colour, covered with grey and other hairs; spinners dark blackish-brown. Genital aperture of a characteristically different form from that of the species before described.

*Hab.* Mexico, Amula in Guerrero (*H. H. Smith*).

## MISUMENA, Latreille.

*Runcinia,* Cambridge, anteà, p. 72.

Ten species described and figured by me under the genus *Runcinia*, Simon (anteà, pp. 72–78, pls. ix., x.), were examined, before description, by M. Simon himself, and were stated by him to belong to his genus *Runcinia*. Trusting to this determination I so described them; subsequently M. Simon (Histoire des Araignées, i. p. 1020) states that not one of them belongs to *Runcinia*, but all to *Misumena*, Latr. Whether this latter opinion is more reliable than the former remains for future investigation. Having recently examined examples of the typical *Runcinia* (*Thomisus*) *lateralis*, C. Koch, it is clear that the ten species alluded to are not referable to *Runcinia*, Simon, but I hardly think they all belong to *Misumena* as at present characterized; some of them seem to be near *Plancinus*, Sim.

## TMARUS, Simon.

### **Tmarus jocosus,** sp. n.

*Adult female,* length slightly over 3 lines; *adult male*, length $2\frac{1}{2}$ lines.

General form and structure normal.

*Cephalothorax* as broad as long; pale dull yellowish-brown, much mottled with white, especially on the sides and fore part; dark black-brown on each side of the posterior side of the thorax, the whitish (or dull

cream-colour) markings showing a somewhat oval transverse whitish ring enclosing the hind-central pair of eyes and some converging lateral whitish lines; the surface of the cephalothorax has a few prominent dark bristles springing from small blackish spots.

*Eyes* normal; the central quadrangle is broader than long, and its anterior side is shorter than the posterior. The interval between the hind-centrals is less than that between each and the hind-lateral eye next to it; laterals seated on strong tubercles larger than the rest, the fore-lateral considerably largest. Clypeus obliquely prominent, its height about equal to half that of the facial space.

*Legs* normal, 1, 2, 3, 4; 1 and 2 scarcely different in length, greatly longer than 3, 4, which are also nearly equal. They are dull yellowish in colour, mottled with white, chiefly in front of the femora of the first and second pairs, where they are also marked with small brown or black spots; furnished pretty numerously, but not conspicuously, with hairs and spines, the spines issuing from small black spots.

*Falces* moderate in length and strength, conical; colour dull yellowish, marked and mottled with white.

*Maxillæ*, *labium*, and *sternum* normal and of a whitish colour.

*Abdomen* (♀) truncate before, widest towards the hinder part, on the upperside of which there is a considerable obtuse prominence directed backwards. The colour of the abdomen is dull brownish-yellow, mottled with white and thinly spotted with black, the latter with a tendency to form oblique transverse angular lines on the upperside of the prominence, where, as well as in front of it, are some longer transverse, curved or slightly angular yellow-brown lines; the surface is furnished thinly with prominent slender bristles issuing from minute dark spots; at the hinder extremity of the abdomen, on each side above the spinners, is an irregular black patch or small marking. The underside is whitish, with several longitudinal parallel lines of small dusky blackish spots. The genital aperture is of characteristic form.

The *male* resembles the female in general colours and markings, but these latter are more distinct, especially on the fore femora of the legs and on the cephalothorax. The abdomen is nearly cylindrical, and almost entirely wants the prominence on the hinder part of the upperside; the colour is a more uniformly dull greyish-yellow, with white along the central longitudinal line of the upperside, where are also traces of some white angular transverse lines; it is also more minutely and regularly speckled with minute black points; the underside is white, with a broad, longitudinal, suffused blackish central band, and a line of blackish spots or points on each side. The palpi are short; the radial and cubital joints very short, furnished with some strong bristles, the former roundish or nodose, the latter broad and spreading in front, with a long, tapering, somewhat sinuously curved, pointed apophysis, of a deep blackish red-brown colour, double the length of the joint, at its fore extremity on the outer side, and closely adhering to the outer margin of the digital joint; beneath this, on the same side, is a much shorter one, tapering, curved, and with a strongly bent, truncated or somewhat bifid point, on the outer side of which are a few coarse black hairs; opposite to this last apophysis is an obtuse prominent corneous point, near which are numerous strong black bristles. Digital joint rather large, broad-oval, its anterior extremity ending in a somewhat sharp, short, corneous point. Palpal organs prominent, highly developed, consisting of a strong black corneous process, with a prominent rather corkscrew-shaped one in the middle.

*Hab.* COSTA RICA (*Sarg*).

## FILISTATA, Latreille.

### **Filistata capillosa,** sp. n.

*Adult female*, length nearly 7 lines.

General form and structure normal.

*Cephalothorax* inversely heart-shaped, no lateral marginal impression at the caput, dark brown, clothed with grey pubescence and with a tapering black-brown band from and including the eyes to the thoracic junction. The oblique indentations denoting the junction of the caput and thorax are indicated by a diffused yellow-brown line or stripe.

*Eyes* in a semicircle, its convexity directed forwards; ocular area considerably broader than long; posterior row straight, the two middle eyes wide apart, each very near but not quite contiguous to the lateral eye on its side. Central pair no more than half a diameter apart, and at a nearly equal distance from the fore-lateral eyes, and each is less than that from the hind-central eye nearest to it. The fore-laterals are

largest. Lateral eyes separated by about a third of the diameter of one of the fore-laterals. Clypeus much projecting, its longitudinal extent being equal to nearly double that of the ocular area.

*Legs* moderately long, 1, 4, 2, 3, strong; the femora and tibiæ of the first and second pairs densely clothed with long coarse hairs of nearly equal lengths and giving a brush-like appearance. The femora are black-brown, the tibiæ deep reddish-yellow-brown; all the joints except the tarsi and metatarsi are marked with longitudinal paler reddish-yellow-brown stripes, the femora less conspicuously; metatarsi and tarsi pale yellow-brown, the latter palest. All the legs are more or less clothed with greyish pubescence, and furnished beneath the tibiæ, metatarsi, and tarsi with spines varying in length and strength; a short calamistrum at the hinder extremity of the metatarsi of the fourth pair on the outer side.

*Maxillæ*, *labium*, and *sternum* densely clothed with dark-coloured coarse hairs.

*Abdomen* deep black-brown, clothed with short pale and other hairs, and with a narrow central longitudinal pale yellow-brown line on the upperside reaching through two-thirds of its length; on each side of this line is a longitudinal row of three equally separated pale greyish spots. On the middle of the underside is a quadrate yellow-brown, bare, coriaceous-looking area, broader than long, its lateral margins edged with a whitish line and its hinder margin covering a transverse slit leading no doubt into a spiracular organ. Spinners short, compact; immediately in front of the infra-mamillary organ or spinner there appears to be another transverse spiracular slit. The genital aperture is a simple transverse narrow opening.

*Hab.* MEXICO, Amula in Guerrero, Omilteme in Guerrero (*H. H. Smith*).

### **Filistata tractans,** Cambr.

The male of this species is described and figured, anteà, p. 183, t. 23. figg. 4, 4 *a–d*.

The female, since found in the Mexican collection, is 8 lines in length. It is of a general yellow-brown colour. The *cephalothorax* has the oblique junctions of the caput and thorax, and the region of the thoracic indentation, paler than the rest. The *legs* are furnished with normal spines and hairs. The *abdomen* is of a duller brown than the cephalothorax and legs. The whole spider is in general form and size very like *F. capillosa*, suprà, p. 289, but may at once be distinguished not only by the darker, almost black hue of the latter, but by the absence of the dense brush of hairs beneath the femora and tibiæ of the first two pairs of legs, as well as by a slight difference in the size and relative position of the eyes.

*Hab.* MEXICO, Orizaba (*H. H. Smith*).

## APOLLOPHANES, Cambridge.

### **Apollophanes distinctus,** sp. n.

*Female, immature*, length rather over $2\frac{1}{2}$ lines.

In general form and appearance very like *A. punctipes*, Cambr., anteà, pp. 79, 252, t. 9. figg. 15, 15 *a–c*, to which it is no doubt very nearly allied; but it differs so much in its markings that I feel convinced that it belongs to a distinct species.

*Cephalothorax* brownish-yellow, edged with a black line; almost the whole of each side, excepting a narrow marginal border extending round the clypeus, deep brown, with well-defined edges, leaving a broad central longitudinal band slightly marked with a few minute black points.

*Legs* pale yellow, thickly speckled with black, the black dots forming on the first three pairs of legs a broad fairly well-defined longitudinal stripe.

*Falces* yellowish, the basal portion in front, like the sides of the cephalothorax, deep brown.

*Palpi* pale yellow, speckled with black.

*Maxillæ* and *labium* pale yellow, with a few black dots.

*Sternum* yellow, with a narrow marginal border formed by amalgamated black points, and a few others dispersed about its surface.

*Abdomen* of a dull brownish-yellow ground-colour; a broad longitudinal central slightly tapering band runs

from end to end, mottled with yellow-brownish and whitish, with a clear central longitudinal lanceolate marking at its fore end, followed by a black spot and a darker brown line to the spinners; on each side of the broad band is a narrower well-defined black-brown band or stripe; the sides are longitudinally marked with broken black-brown and white striæ. The underside is white, with a longitudinal central stripe of more or less amalgamated black dots.

*Hab.* Mexico, Amula in Guerrero (*H. H. Smith*).

## PHILODROMUS, Walckenaer.

### **Philodromus decolor,** sp. n.

*Adult female,* length rather less than $1\frac{1}{2}$ lines (3 millim.).

The general form of this small species is normal. The cephalothorax is of a whitish-yellow colour, clothed with pale hairs, and with a broadish well-defined deep blackish marginal border, and two longitudinal stripes (formed by deep brown specks) on each side of the median line near the upper part of the thorax, continued forwards along the oblique junctional line of the caput to beneath the lateral eyes; the clypeus, whose height is half that of the facial space, is also speckled with black, and there are a few specks of the same on the hinder part of the caput, likewise between the hind-central pair of eyes are two opposed, short, curved, yellow-brown, longitudinal lines.

*Eyes* small, subequal, seated on whitish tubercles; posterior row much less curved than the anterior row; the interval between those of the hind-central pair is double or rather more than that between each and the hind-lateral on its side. The central quadrangle is much wider than long, but its anterior side is much shorter than the posterior side, and the fore-centrals are further from each other than from the fore-laterals.

*Legs* moderately long, rather slender, 2, 1, 4, 3, not greatly different in length, furnished with hairs and spines. Colour pale yellow, the femora marked with two well-defined, black, longitudinal, narrow stripes.

*Falces* pale yellowish, speckled with black, and furnished in front with coarse bristly hairs.

*Palpi* moderately long, yellowish, furnished with hairs and a few spines.

*Maxillæ* and *labium* normal; colour pale yellowish.

*Sternum* rather elongate heart-shaped, its posterior extremity a little, and obtusely, drawn out. It is whitish in colour, covered with coarse pale bristly hairs.

*Abdomen* oval, whitish above, minutely and thinly marked with black specks, and covered with pale and yellowish hairs; an obscure, longitudinal, central, narrow, lanceolate, brown marking occupies the fore part of the upperside, and on each side of the middle of this marking is a small black dot; on each side of this, and converging to near the spinners, is an irregular obscure brown stripe; the sides are yellow-brown, with an obscure yellowish oblique patch; the underside is whitish. The genital aperture is small but of a characteristic form. Spinners short, compact, dull yellowish, suffused with blackish on the outer sides.

*Hab.* Costa Rica (*Sarg*).

## MERMESSUS *, gen. nov. (fam. Theridiidæ; subfam. Erigoninæ).

*Cephalothorax* broad-oval; broadly truncate before, with the fore-corners well rounded; caput moderately and gradually raised; ocular area broad and a little prominent; clypeus impressed close to the ocular area, and a little prominent at the lower margin, its height about, or nearly, half that of the facial space.

*Eyes* rather large, subequal, the fore-centrals smallest, the rest scarcely different in size from each other, the fore-laterals perhaps slightly largest. The posterior row is straight or very slightly curved, the convexity directed backwards; the anterior row not greatly shorter than the posterior, and the convexity of its much stronger curve directed forwards. The hind-centrals are distinctly but not greatly nearer to each

* Nom. propr.

other than to the hind-laterals, from which they are separated by about a diameter. The fore-centrals are separated by nearly half a diameter, and by rather more than half from the fore-laterals. The central quadrangle is scarcely longer than broad, but its anterior side is shorter than the posterior side.

*Legs* moderate in strength and length, apparently 4, 1, 2, 3, furnished with hairs and a very few slender erect bristles, one on the genuæ being almost a spine.

*Falces* long, strong, divergent, the extremities rather pinched, armed with a row of teeth along the outer margin of the upperside, and a very strong tooth near their fore extremity on the inner side. Fang long and strong.

The *palpi* have a longish, subclavate, rather bent humeral joint, along the outer side of which, and a little beneath the lower part, are a few small tooth-like tubercles in a longitudinal line, each surmounted by a short hair, and beneath the fore extremity of the short somewhat clavate cubital joint is a short prominence or point, or rudimentary spur.

*Maxillæ* moderately long, strong, broad, especially towards their base, which is massive, prominent, and rounded, much inclined towards the labium.

*Sternum* broad, truncated heart-shape, nearly or quite as long as broad; posterior extremity a little abruptly produced between the coxæ of the fourth pair of legs, where it bends upwards in a broadish obtuse ending.

## **Mermessus dentiger,** sp. n.

*Adult male,* length 1 line.

*Cephalothorax* yellow-brown.

*Legs* dull brownish-yellow.

*Palpi* similar to the legs in colour. Radial joint short, with long, strong bristles on the outer side, broad at its extremity, which is divided into some strong prominences—one in front towards the outer side broad, obtuse, and with a small dark point at its inner corner; another, strong, pointed, dentiform, towards the inner side, and another stronger, obtusely pointed, beneath. The digital joint is of good size, with a large lobe at its base on the inner side. Palpal organs complex, with prominent lobes and spiny processes.

*Falces* similar in colour to the cephalothorax.

*Maxillæ*, *labium*, and *sternum* dark yellow-brown.

*Abdomen* oval, dark dull brown, covered thinly with short hairs; a strong semicircular fissure underneath, close in front of the spinners, which are short, compact, and of a dull yellow-brown colour.

*Hab.* GUATEMALA (*Sarg*).

## METTUS *, gen. nov. (fam. Theridiidæ).

*Cephalothorax* round-oval, nearly as broad as long; thorax gibbous or elevated, sloping gradually to the ocular area, which is rather elevated and a little prominent, its fore extremity subconical; normal indentations slight.

*Eyes* unequal in size; those of the posterior row and the fore-laterals nearly equal, in a compact transverse quadrate group occupying the whole of the well-marked ocular area, those of the posterior row largest, in a straight line, equidistant, very near together, but not quite contiguous to each other; those of the anterior row, which is nearly as long as the posterior row, form a curved line whose slight convexity is directed forwards; the fore-central pair are smallest and separated by 1 ss than a diameter from each other, and by about an equal distance from the fore-laterals. The central quadrangle is rather longer than broad, and its anterior side is much the shortest; the eyes of each lateral pair are well separated from each other. Clypeus very strongly impressed at its upperside, and obtusely prominent at the lower margin; its height is equal to half that of the facial space.

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* Nom. propr.

*Legs* short, not very unequal in length, 4, 1, 2, 3, tolerably strong, furnished with hairs and a few slender bristles only; tarsi ending with three claws, the superior pair long, not very strongly curved, and with apparently only two minute denticulæ beneath each near the middle.

*Falces* small, weak; fang short.

*Maxillæ* moderate in length, broad at their extremity, inclined to the *labium*, which is broad, very short, and its apex truncate.

*Sternum* heart-shaped, longer than broad, obtusely pointed behind, where it bends upwards between the coxæ of the fourth pair of legs.

*Palpi* truncate, with a strong, slightly curved, rather obtuse terminal claw, having some long fine denticulations beneath its anterior half.

*Abdomen* oblong-oval, broadest towards its posterior extremity, and considerably projecting over the base of the thorax.

### **Mettus reclivis,** sp. n.

*Adult female*, length $1\frac{1}{2}$ lines (2·5 millim.).

The *cephalothorax* is yellow-brown, with a blackish marginal line; the ocular area black.

The *falces* are a little paler than the cephalothorax.

The *legs* and *palpi* orange-yellow.

*Maxillæ* and *labium* yellow-brown.

*Sternum* yellow-brown, with a pale yellowish wedge-shaped central longitudinal stripe at its hinder extremity.

*Abdomen* thinly clothed with short hairs, and of a dull luteous-brown colour, palest underneath, and with a pale dull yellowish blotch just above the spinners. The genital aperture is not conspicuous, but is of characteristic form. Spinners short, compact, the four outer ones of about equal length.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## THERIDION, Walckenaer.

### **Theridion vivum,** sp. n.

*Adult female,* length slightly over $\frac{3}{4}$ of a line.

This spider is of ordinary general form and structure.

The *cephalothorax* is of a pale orange-yellow.

The *eyes* are small, subequal, on black spots, and in the normal position; those of the posterior row are equally separated by nearly two diameters' interval. The fore-central eyes are largest. The two rows are nearly equal in length, and are equally but not strongly curved; the convexity of the curve of the posterior row is directed backwards, that of the anterior row forwards. The central quadrangle is a little broader than long, and its fore side shorter than the hinder one. The height of the clypeus is equal to more than half that of the facial space.

The *legs* are rather long, 1, 4, 2, 3, but not greatly differing in length, slender, furnished with hairs and a few prominent slender bristles, and of a bright orange-red hue.

*Palpi* rather long, similar to the legs in colour and armature, and ending with a minute pectinated claw.

*Falces* moderate in length and strength, straight and similar in colour to the cephalothorax.

*Maxillæ* and *labium* normal, and like the falces in colour.

*Sternum* broadish heart-shaped, broadly obtuse at its hinder extremity, and its colour is like that of the cephalothorax.

*Abdomen* short-oval, not excessively convex above, of a uniform dull luteous-yellow colour, and covered very thinly with short hairs; one or two examples showed traces of obscure dusky blotches and markings, but no definite traceable pattern. Genital aperture not conspicuous, but of characteristic form. Spinners short, convergent, and of a dull orange-yellow colour.

*Hab.* Costa Rica (*Sarg*).

## ACHÆA, Cambridge.

### **Achæa mendax,** sp. n.

*Adult male*, length scarcely 1 line.

This spider agrees with the typical *Achæa insignis*, Cambr., P. Z. S. 1882, p. 428, t. 30. fig. 5, in all excepting the relative size of the eyes of the fore-central pair, which in that species are greatly larger than the rest, while in the present spider they are scarcely, if anything, larger than the hind-centrals.

The *cephalothorax* is of normal *Theridion* form; caput prominent, especially on the side of the fore-central eyes; clypeus much impressed, and about equal in height to half that of the facial space. Colour yellow-brown, marked with converging streaks and markings of deep brown. Thoracic indentation large and deep.

*Eyes* rather large, subequal; posterior row slightly curved, the convexity of the curve directed backwards, these eyes equally separated by about two-thirds of the diameter of the centrals. The central quadrangle is distinctly longer than broad, its anterior eyes very prominent and directed forwards, separated from the fore-laterals by a very narrow interval, but not quite contiguous to them, and from each other by an interval about equal to that which separates those of the posterior row. The fore side of the quadrangle is, if anything, slightly wider than the hinder side.

*Legs* rather long, 1, 2, 4, 3; those of the first and second pairs much the longest, and furnished with longish hairs and bristles, some of a spiny character; most of these on the femora of the first and second pairs had been broken off, leaving only the tuberculous-looking stumps. Colour orange-yellow-brown.

*Palpi* short, similar in colour to the legs; the radial joint is shorter than the cubital, but broadly and obtusely prolonged at its outer extremity, which is furnished with a marginal row of long, strong, tapering bristles; digital joint oval, with a strong rather bent obtusely-pointed projection at its extremity. The palpal organs consist of a large corneous lobe, which is broadest behind and has its fore extremity broken up into some short characteristic spines and projections.

*Falces* similar in colour to the cephalothorax.

*Maxillæ* and *labium* yellowish, tinged with brown.

*Sternum* large, heart-shaped, angularly prominent between the basal joints of the legs; its posterior extremity broadish, obtuse, and strongly bent upwards between the coxæ of the fourth pair of legs. Colour yellow.

*Abdomen* somewhat cylindric-oval, obtuse at its hinder extremity; colour dull luteous-brown, with no apparent pattern, but irregularly spotted with black and furnished thinly with long, coarse, pale yellowish bristly hairs; halfway between the spiracular plates and the spinners is a long transverse semicircular prominent fold, but whether connected with a fissure or not could not be determined owing to the rather shrunken general condition of the epidermis.

*Hab.* GUATEMALA, Coban (*Sarg*).

## DIPOENA, Thorell.

### **Dipoena proba,** sp. n.

*Adult male*, length scarcely $\frac{3}{4}$ of a line (1·5 millim.); *adult female*, slightly over 1 line (2 millim.).

*Cephalothorax*, looked at from above and behind, very nearly circular; fore part of caput above prominent. Clypeus much impressed, and its height about half that of the facial space. Colour brownish-yellow tinged with orange; a broad dark brown central longitudinal band includes the ocular area and narrows a little at its abrupt termination near the thoracic indentation; there is also a broad, lateral, not very sharply defined, brown band on each side which includes the clypeus.

*Eyes* of tolerable and nearly equal size, all pearly-white, excepting the fore-central pair, which are darkish grey. Those of the hinder row equidistant from each other, the intervals being rather less than a diameter; this row is slightly curved, the convexity of the curve directed backwards. The central quadrangle is a square whose fore side is longer than the rest; each fore-central eye is almost contiguous to the fore-lateral eye on its side.

*Falces* moderately long, slightly tapering, almost cylindrical, straight, similar in colour to the cephalothorax, slightly tinged with brown.

*Palpi* short, slender; cubital joint very short; radial joint equally short, but its fore extremity spreads, especially on the upperside, where it has some long, coarse, bristly hairs; the radial joint is yellow-brown, the cubital and humeral joints yellow. The digital joint is brownish-yellow, very large, of an irregular form, with a strong prominence towards its fore extremity, and a roundish lobe at its base on the outer side. The palpal organs are of great size and development, consisting chiefly of a very large somewhat rounded corneous lobe, with some corneous processes and spines at their fore extremity on the outer side.

*Maxillæ* strong, much inclined towards the *labium*, which is much broader than high, narrower and somewhat rounded at the apex. These parts are yellow-brown.

*Sternum* large, subtriangular, very convex, much bent upwards at the posterior extremity, which is obtusely pointed. Colour yellow-brown, with an obscure paler longitudinal broken stripe along the middle.

*Abdomen* globular, furnished with a few long coarse bristles, of a warm yellow-brownish colour, marked with many blackish-brown markings and spots: most noticeable among these is a broadish, longitudinal, central, rather irregular, obtusely dentated band reaching about two-thirds from the fore extremity to the spinners. There are two whitish spots in a transverse line just above the spinners. Underside black-brown, with a white spot about the middle of each side. Spinners yellow-brown.

*Legs* rather short, 1, 4, 2, 3, brownish-yellow, obscurely marked and annulated with brown, and furnished with hairs and a longish prominent bristle or two on the genuæ and tibiæ.

The *female* has similar markings, but it is of a paler hue; the intervals between the eyes are larger, and there is a good deal of white mixed with the other markings on the abdomen. Just in front of the spinners is a rather prominent transverse lip, no doubt covering the entrance to a spiracular organ, and about the middle of the upperside is a small transverse prominence at the hinder extremity of the central black-brown band. Sternum black-brown, this colour forming angular points opposite the insertion of the legs; a lateral marginal row of largish yellow blotches, and a broad central longitudinal tapering yellow stripe, much suffused at the hinder extremity. Genital aperture very inconspicuous, consisting of a single transverse lanceolate slit.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

## EURYOPIS, Menge.

### **Euryopis probabilis,** sp. n.

*Adult female,* length $1\frac{3}{4}$ lines.

*Cephalothorax* broad behind, attenuated before; caput slightly elevated, prominent; clypeus equal in height to half that of the facial space; lateral marginal constriction at the caput slight. Colour yellow-brown, with dusky-brown converging lines.

*Eyes* in normal position, subequal; those of the posterior row in a slightly curved transverse line, the convexity of the curve directed forwards, and the eyes equally separated by nearly an eye's diameter. Anterior row strongly curved, the convexity also directed forwards. The interval between the fore-centrals is greater than between them and the fore-laterals; the latter interval being very small. The fore-centrals are rather the largest of the eight. The central quadrangle is longer than broad, its fore side slightly, if at all, longer than the hinder one.

*Legs* moderately long, not very strong, 4, 1, 2, 3. The tibiæ are slightly clavate, almost as strong as—those of the fourth pair, indeed, stronger than—the femora. The legs are of a rather pale yellow-brown colour, the posterior half of the femora palest, furnished with hairs only.

*Falces* similar in colour to the cephalothorax.

*Maxillæ* and *labium* paler.

*Sternum* dark yellow-brown.

*Abdomen* rather large, oval, or nearly heart-shaped, projecting considerably over the base of the cephalothorax, and moderately convex above. It is of a dark blackish-brown colour above, marked on each side with a longitudinal line of pale luteous irregular spots or markings of different shapes and sizes, reaching

from about one-fourth of the length from the fore part to a little above the spinners, where the two lines converge; these spots are flecked with white, which, perhaps, in fine-conditioned examples may have a silvery hue. Underside and spinners pale yellow-brown; genital aperture of characteristic form.

*Hab.* MEXICO, Orizaba (*H. H. Smith*).

### **Euryopis proxima,** sp. n.

*Adult female,* length $1\frac{3}{4}$ lines.

Closely allied to *E. probabilis* (suprà, p. 295), and similar in size, general form, and structure, but differs in pattern and in the form of the genital aperture.

*Cephalothorax* yellow-brown, with an indistinct paler converging line on each side between the caput and thorax, and some scratchy converging lines on the thorax.

*Eyes* rather larger than those of *E. probabilis*, but in a similar position; those of the posterior row separated by equal intervals, but of distinctly less than a diameter each.

*Legs* rather short, 4, 1, 2, 3, brownish-yellow in colour, with the anterior half of the femora and tibiæ dark yellow-brown.

*Falces* similar in colour to the cephalothorax.

*Maxillæ* and *labium* darker yellow-brown, tipped with a paler hue.

*Sternum* yellow-brown, with a longitudinal, central, pale yellow tapering line on the fore half.

*Abdomen* rather large, oval, moderately convex, black-brown above, marked with pale yellowish spots and irregular patches, flecked with white; a large patch at the middle of the fore extremity, continued posteriorly by a fine broken line to about the middle of the abdomen, and other patches in a longitudinal line on each side to the spinners interspersed with minute spots. The middle of the underside is brownish, with a large irregular pale yellowish patch on each side of it extending a little way up each side of the abdomen. Genital aperture of a characteristically different form from that of *E. probabilis*. Spinners pale yellowish.

*Hab.* MEXICO, Orizaba (*H. H. Smith*).

## MIMETUS, Hentz.

### **Mimetus rapax,** sp. n.

*Adult male*, length $1\frac{3}{4}$ lines; *adult female*, $2\frac{1}{3}$ lines.

*Cephalothorax* (of male) yellow, with a central longitudinal fulvous-brown band, gradually tapering towards the hinder part, the edges somewhat dentate, and with some small yellowish patches within its limits. Clypeus about half the height of the facial space.

*Eyes* unequal in size, the fore-centrals much largest and placed on a strong prominence; the central quadrangle much broader in front than behind, the sides and fore side about equal in length; those of each lateral pair contiguous to each other, on a strongish tubercle.

*Legs* long, rather slender, 1, 2, 4, 3, furnished with numerous spines of different length and strength, and arranged in the normal symmetrical order. They are yellow in colour, marked and annulated with reddish and yellowish-brown.

*Falces* long, straight, not very strong; colour orange-yellow, the fore part deep reddish-brown.

*Palpi* short, yellow; cubital joint very short, nodose, with two long, strong, tapering bristles in front; radial joint longer than the cubital, of a tumid or oval shape, furnished with several long similar bristles of different lengths; digital joint large, of irregular form, and with some strong bristles in front. Palpal organs highly developed and prominent, composed of various corneous processes, and with a long circularly bent black spine surrounding them.

*Maxillæ* long, Theridiiform, somewhat pointed at the extremity, inclined towards the labium; colour yellow-brown, paler at the upper ends.

*Labium* large, roundly convex in front, broader than high, somewhat rounded at the apex; colour like that of the maxillæ.

*Sternum* heart-shaped, truncate before, rather sharp-pointed behind; colour pale yellow, with a few yellow-brown spots or blotches round the margins.

*Abdomen* subtriangular, furnished with strong bristly hairs and with a strong tubercular conical prominence on each side towards the fore extremity. Colour pale yellowish-brown, mottled with white on the sides and upperside, and with a yellow-brownish, rather indefinite and broken, central, longitudinal, tapering band on the upperside. Underside pale yellowish, with some white agglomerated spots on each side of the median line between the spinners and the spiracular plates.

The *female* resembles the male in general characters, but has the darker markings sometimes more strongly marked and defined. The genital aperture is of characteristic form.

This species is nearly allied to *M. triangularis*, Keys. (of which the female only has been described), but differs in the form of the genital aperture, as well as in other respects.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Mimetus trituberculatus,** sp. n.

*Adult male*, length $1\frac{3}{4}$ lines.

*Cephalothorax* pale yellow, very slightly suffused along the sides and on the ocular area with rusty-reddish.

*Eyes* of posterior row equally separated from each other (by about an eye's diameter). The fore side of the central quadrangle is a little longer than the hinder one, which last is equal to the sides in length.

*Legs* long, slender, 1, 2, 4, 3, pale yellow, furnished with the normal spines, and with a brownish annulus at the fore extremity of the femora; the genuæ and fore extremity of the tibiæ are rather rusty-reddish.

*Palpi* similar to the legs in colour and armature.

*Falces* long, straight, yellow, slightly suffused with rusty-reddish at their fore part.

*Maxillæ* and *labium* normal and of a yellow-brown hue.

*Sternum* yellow.

*Abdomen* subtriangular, with a strong subconical prominence on each side near the hinder extremity, and a small erect (blackish) tubercular eminence on the median line of the upperside, almost in a straight line with the other two prominences. Colour white, with a dull brownish irregular spot in the median line halfway between the erect eminence and the fore extremity, and some small dusky and blackish markings on each side of the hinder part (which is produced into a slightly subangular form) behind the lateral prominences. Underside dull whity-brown, spotted with white, and a few blackish marks near the spinners. Genital aperture of a strongly characteristic form.

This species may at once be distinguished by the position of the lateral subconical prominences on the abdomen.

*Hab.* PANAMA, Los Remedios in Chiriqui (*Champion*).

## **Mimetus crudelis,** sp. n.

*Adult male*, length $1\frac{1}{2}$ lines.

Of normal general form and appearance.

*Cephalothorax* yellow-brown, with an indistinct, central, longitudinal, broad tapering band of a deeper hue.

*Eyes* in the normal position. Those of the hind-central pair less than half a diameter from each other, and at least three times as far from the hind-laterals; the exact size and position of the fore-centrals is uncertain, owing to the separation of the cuticle at that part from the eyes themselves.

*Legs* very long, 1, 2, 4, 3. Spines normal; pale yellow-brown, slightly tinged with a deeper hue at the fore extremity of the femora and on the genuæ.

*Falces*, *maxillæ*, *labium*, and *sternum* pale yellow-brown.

*Palpi* moderately long, similar in colour to the legs; cubital joint very short, furnished with two curved tapering spiny bristles of great length; radial joint distinctly less than double the length of the cubital, clavate, very tumid above and furnished with long, strong, curved, tapering bristles of varied length; digital joint large, of irregular form, furnished with long bristles. Palpal organs prominent, highly developed, consisting of various corneous processes and spines.

*Abdomen* of a subtriangular form, or nearly diamond-shape, rounded in front, obtusely pointed behind. At its broadest part on each side, rather nearer the fore than the hinder extremity, is a short subconical prominence. Its colour is a dull yellowish-brown, with a central, longitudinal row of white spots, of which the foremost is elongate and much the largest; on each side, just behind the conical eminence, is also a white spot or patch, behind which, again, is a small black spot. Underside bordered with white and with a black spot on each side.

Nearly allied to *M. bigibbosus*, Cambr. (anteà, p. 133), and *M. rapax* (p. 296). The different structure of the palpi and palpal organs distinguishes it at once from both.

*Hab.* GUATEMALA (*Sarg*).

**Mimetus hirsutus,** sp. n.

*Adult female*, length rather over 1 line.

General form and structure normal.

*Cephalothorax* furnished with some long spine-like bristles and of a dull orange-yellow colour, with a longitudinal central tapering band, including the ocular area, more or less suffused with blackish, its margins on the hinder portion black-brown.

*Legs* rather long, slender; spiny armature normal, also with numerous long hairs. Colour yellow, somewhat irregularly and sparingly marked and spotted with dark brown and blackish, and a more distinct brown annulus at the fore extremity of the tibiæ, metatarsi, and tarsi of the first and second pairs, the femora tinged with orange.

*Abdomen* subtriangular, the anterior corners slightly subconical. Colour dull whitish-yellow, the upperside mostly occupied by a tapering, longitudinal, blackish band, somewhat dentate on the lateral margins, and spotted with whitish; its upper surface furnished with some long pale spiniform bristles like those on the cephalothorax, and numerous long bristly hairs.

The single example received of this spider was in a much shrunken state, and consequently the form of the genital aperture could not be seen; but the markings of the cephalothorax and abdomen sufficiently indicate its distinction from any other species known to me.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

## METABUS *, gen. nov. (fam. Epeiridæ).

*Cephalothorax* rather flat, very short, as broad as or broader than long; lateral marginal impression at the caput tolerably strong; from the posterior margin to the eyes is a gradual slope with a slight convexity at the occiput. The height of the clypeus, which is rather retreating, is equal to or a little exceeds half that of the facial space.

*Eyes* subequal, moderately closely grouped together in two transverse rows (or four pairs) of equal, or very nearly equal, length; the posterior row is straight; the curve of the anterior row is strong, and its convexity is directed forwards. The central quadrangle is square, with its fore side a little shorter than the rest. The eyes of the posterior row are equally separated by more than an eye's diameter; the hind-centrals are rather the smallest, the fore-centrals largest, of the eight, separated by less than a diameter and much further from the fore-laterals. Those of each lateral pair are seated on a moderate tubercle, the posterior eye being the largest.

*Legs* very unequal in length, 1, 2, 4, 3, those of the first pair being at least three times the whole length of the spider, moderately strong, furnished with hairs and a few short fine spines.

*Falces* moderately strong.

*Maxillæ* rather long, strong, considerably broadest at their extremity, very divergent.

*Labium* as long as broad, subtriangular at the apex.

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* Nom. propr.

*Sternum* elongate heart-shaped or subtriangular; the posterior extremity drawn out gradually into a fine point between the coxæ of the fourth pair of legs.

*Abdomen* large, short, broad, equally broad at each end, oval, very convex above, and projecting a good deal over the base of the cephalothorax.

This genus is nearly allied to *Meta*, C. L. Koch.

### **Metabus gravidus,** sp. n.

*Adult female*, length 5 lines.

*Cephalothorax* yellow-brown; the caput and sides of the thorax deep brown.

*Legs* yellow-brown; the femora broadly and obscurely banded with dark yellow-brown. The tarsi and metatarsi have no spines.

*Falces* yellow-brown.

*Maxillæ* and *labium* deep blackish brown, with a pale narrow border at their extremities.

*Sternum* deep blackish.

*Abdomen* deep brown, covered with closely approximated silvery and dull yellowish-white spots; the silvery spots in curved transverse lines round and just below the anterior margin of the upperside, and continued backwards along each side by a row of four similar silvery patches to just above the spinners, and two converging rows of similar but less distinct spots or patches along the median line, decreasing gradually in size and coalescing into short transverse lines above the spinners. The sides are of a deeper brown, and have an oblique indistinct whitish-yellow stripe near the middle. The underside is black-brown, with four whitish markings in a quadrangle rather longer than broad; the two foremost are short lines, the two hinder ones smaller, oblique, elongate spots. Spinners very short, blackish, compact. Genital aperture small and inconspicuous, but of characteristic form.

*Hab.* GUATEMALA (*Sarg*).

## TETRAGNATHA, Latreille.

### **Tetragnatha digitata,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines; *adult female*, length 3 lines.

The general form and appearance of this species is normal.

The *cephalothorax* is yellow-brown, the normal indentations marked by darker lines.

The *eyes* are on tubercular black spots. The posterior row is very slightly curved, the convexity of the curve directed forwards; that of the anterior row, which is strongly curved, is in the same direction. The interval between the hind-central pair is less than that between them and the hind-laterals. The central quadrangle is a square, with its fore side shorter than the hinder one. The laterals are well separated by rather less than the diameter of the fore-lateral eye. The height of the clypeus is about equal to the diameter of a fore-central eye.

*Legs* long, slender, 1, 2, 4, 3, and of a pale dull brownish-yellow hue. Spines few, short, and fine.

*Palpi* moderate in length; cubital and radial joints short and about equal in length. The digital joint has its anterior finger-like extension of abnormal length, equal to double that of the large and highly-developed palpal lobe, and as long as, or even longer than, the humeral joint of the palpus. The palpal organs are large, and have a long tapering corneous process directed forwards in close proximity to the finger of the digital joint, and in connection with it a slightly curved, slender, pointed spine extends beyond the extremity of the finger.

*Falces* tolerably strong, prominent, divergent, rather more than half the length of the cephalothorax; a strong pointed tooth near the fore extremity towards the outer side and a longitudinal row of several strong teeth (diminishing in strength from the foremost backwards) towards the inner side, and another row below the fang. Colour dark yellow-brown.

*Maxillæ* normal in form, dark yellow-brown.

*Labium* normal and of a deep black-brown colour.

*Sternum* elongate heart-shaped or subtriangular. Colour yellow-brown.

*Abdomen* elongate, subcylindric, closely mottled with white spots, and with the normal central longitudinal branching dark line well marked; there is a small blackish spot at the issue of the first long lateral oblique branches, and along each side is a black, somewhat irregular, but distinct, stripe extending nearly the whole length of the abdomen. The underside is dull brown, with a longitudinal white marginal line on each side.

The *female* resembles the male, but the falces are less developed and want the strong teeth of the male, but their profile is well arched. The abdomen swells out a little in the middle, and its profile is a little convex in the centre.

*Hab.* Mexico, Orizaba (*H. H. Smith*); Costa Rica (*Sarg*).

## EPEIRA, Walckenaer.

### **Epeira nava,** sp. n.

*Adult female*, length slightly over 2 lines.

This spider belongs to the *E. diadematа* group, and is of normal general form. The cephalothorax is of a dull orange-brownish-yellow colour, clothed with grey hairs and with a yellow triangular patch just in front of the thoracic indentation, its point directed backwards, and with four black dots forming a quadrangular figure, widest in front, round the thoracic indentation. Clypeus less in height than one of the fore-central eyes.

*Eyes* on black spots, in normal position. Central quadrangle a little longer than broad, and its anterior side longer than the posterior. The hind-central eyes are a little larger than the fore-centrals. Those of each lateral pair are seated on a tubercular prominence, and well separated from each other by at least half an eye's diameter.

*Legs* neither very long nor strong, 1, 2, 4, 3, furnished with hairs and spines. Colour similar to the cephalothorax, marked and annulated with dark brown, most distinctly on the femora.

*Palpi* similar to the legs in colour and markings.

*Falces* moderately strong, vertical, conical, and of a brownish-yellow colour.

*Maxillæ* and *labium* pale dull yellowish, palest at their extremity.

*Sternum* pale yellowish, bordered with dusky brown.

*Abdomen* heart-shaped; the anterior shoulders without any eminence. Colour dull yellowish, thickly mottled with dark brown (or dark brown thickly mottled with yellowish). Anterior margin rounded, and a little way behind it are four distinct, but not large, yellowish or cream-white spots in a transverse nearly straight row (probably a series of examples would show a diversity in the size and form of these spots, but in the unique example observed the outer ones are round, the two inner ones comma-shaped). A tapering, pointed-behind, blackish, longitudinal, central stripe, from which two short oblique lines issue on either side, occupies the middle of the upperside, and two angulated, converging, blackish lines run from the outer white spots to the spinners; these angulated lines are edged with yellowish-white on the outer side. The sides of the abdomen are obscurely and obliquely marked with brown and dusky yellowish. The underside is dark brown, with a curved whitish bar on each side and a more distinctly white longitudinal spot or patch near the centre. The genital aperture is prominent, somewhat lyre-shaped, with an obtusely pointed, strongish epigyne directed forwards from its anterior margin. Spinners normal, yellow-brown, narrowly encircled at the base with black, and a broken white line on each side.

*Hab.* Mexico, Teapa in Tabasco (*H. H. Smith*).

### **Epeira honesta,** sp. n.

*Adult female*, length 7 lines; length of cephalothorax $2\frac{2}{3}$ lines; length of abdomen $5\frac{1}{2}$ lines; breadth of thorax $2\frac{1}{3}$ lines.

*Cephalothorax* of ordinary form. It is yellow-brown in colour, tinged with orange-brown on the caput, and clothed with short grey pubescence and a few dark hairs, with some longish coarse grey hairs. On the sides of the caput, near the occiput, in the median line, is a deep black-brown patch, behind which the occiput is suffused with brown, and followed by a darker brown stripe to the hinder end of the thorax;

on either side of the thoracic indentation is a deep black-brown marking formed of two short oblique (parallel) dashes, with a small spot of the same colour halfway to the posterior end of the thorax.

*Eyes* on the three normal tubercular prominences. The central quadrangle is much broader in front than behind; the interval between the hind-central pair being little, if anything, more than a diameter. The interval between those of each lateral pair is distinct, but no more than half a diameter. The fore-central eyes are rather larger than the hind-centrals. The height of the clypeus is nearly half that of the facial space.

*Legs* moderate in length and strength, 1, 2, 4, 3; fairly, but not conspicuously, armed with hairs, bristles, and spines; colour yellow, with distinct broadish annulations throughout, varying from yellow-brown to deep brown and blackish.

*Palpi* yellow, with broad reddish-brown annulations.

*Falces* powerful, vertical, furnished with coarse hairs in front; colour yellow in front, strongly suffused with red-brown on the inner and outer sides, and deep black-brown at each extremity. Some strong teeth at the inner margin of the fore extremity.

*Maxillæ* and *labium* normal; the former yellow, the latter deep black-brown, with the apex yellow.

*Sternum* dark blackish brown, with a band near each lateral margin composed of three more or less confluent yellow spots.

*Abdomen* large, short, broad-oval; length $5\frac{1}{2}$ lines, breadth $4\frac{1}{2}$. Close to each lateral margin of the upperside is a longitudinal row of five conical eminences, two, smaller than the others, near together at the fore extremity; in the middle between the hinder eminences of these two rows are three others in a longitudinal line, and forming a cross with them, as long as broad, the middle eminence being common to both arms of the cross. The fore extremity of the abdomen (divided off from the rest by a clean yellow margin which runs through the two foremost eminences) is black-brown, with a clear cream-yellow, elongate, triangular marking in front, the apex directed forwards, the base divided into two roundish lobes; this part of the abdomen has also some other small obscure yellowish spots and marks. The rest of the upperside is yellow, much marked and suffused with black, especially in the median line. Two broken longitudinal, subangulated or sinuous, black lines, margined outside with yellowish-white, run backwards from between the anterior eminences converging to the hinder group or cross of eminences. These lines include and represent the ordinary Epeirid foliated abdominal marking. The sides of the abdomen are marked variously with yellow, yellow-brown, red-brown, and black, the conical eminences being almost entirely yellow. The underside is mostly yellow, the middle of it black-brown, but not continuously, with four distinct central cream-coloured spots in a square, the two posterior spots being much the largest. Spinners short, compact, dark brown. Genital aperture and process looked at from above (the spider being on its back) forming a transverse-oval, or somewhat kidney-shaped, black patch, with a rather short, central, tapering, pointed, slightly curved process or epigyne, somewhat directed backwards.

*Hab.* MEXICO, Omilteme in Guerrero (*H. H. Smith*).

This species is nearly allied to *Epeira hoxæa*, Cambr., anteà, p. 35, t. 5. figg. 6, 6 *a–c*, but differs in being much larger and also in the number and position of the abdominal prominences, as well as in colours, markings, and the form of the genital aperture and process.

### **Epeira semifoliata,** sp. n.

*Adult female*, length rather over 4 lines.

*Cephalothorax* of ordinary form, a little longer than broad. It is yellowish in colour, tinged with light orange-brown, and covered with grey pubescence and long, coarse, grey hairs on each side of the fore part of the caput. On each side of the occiput, close to the anterior part of the thorax, is an irregular, angular-edged, deep reddish-brown patch; near the inner side of each of these patches is a round spot of the same hue. The thoracic indentation is marked by a dark brown spot, and a slightly curved line of six deep brown (almost black) spots crosses the hinder part of the indentation, the convexity of the curve directed backwards. From the last spot but one at each end of this row a short oblique brown line

runs backwards and outwards, ending in a small spot nearer the hinder extremity of the thorax. There are also two small brown spots near together in a transverse row on the median line halfway between the eyes and the thoracic indentation, and another on each side just behind the large brown patch; and the anterior corners of the caput are deep brown.

*Eyes* normal. The central quadrangle is equal in length and breadth, though the anterior side is the longest; its anterior eyes are slightly larger than the posterior. The interval between these posterior eyes is equal to nearly a diameter and a half, that of the anterior to nearly two diameters. In an immature specimen the length of the anterior and posterior sides of the quadrangle appeared to be equal or very nearly so. The height of the clypeus is less than half that of the facial space.

*Legs* moderate in length and strength, ? 1, 2, 4, 3 (in the only adult example seen both legs of the 4th pair were wanting). They are yellow in colour, annulated and marked with black-brown, and furnished, but not conspicuously, with short spines, hairs, and bristles.

*Falces* strong, deep brown, with a large curved yellow patch clothed with white hairs at the base in front.

*Maxillæ* and *labium* normal in form, dark brown, yellow at the extremity.

*Sternum* cream-yellow, with black-brown irregular lateral margins.

*Abdomen* subtriangular, broad in front, obtusely pointed behind, slightly prominent at the shoulders, like some examples of *Epeira diadema*ta, Clk. Colour cream-white; fore extremity and lateral margins black-brown, zigzag or irregularly indented; on the middle of the hinder half of the upperside are two deeply indented longitudinal converging lines, representing all that is left of the ordinary Epeirid foliated central marking. The posterior extremity of the marking is more or less black, and has on it two pairs of round cream-white spots in longitudinal series. Underside more or less suffused with blackish-brown, with a somewhat diamond-shaped central white patch. Genital aperture of a transverse-oval form, with a triangular process drawn out and directed forwards; this process is crossed with deep transverse rugæ or indentations and its prolonged extremity has an articulated appearance.

*Hab.* Costa Rica (*Sarg*).

This spider is allied to *Epeira anastera*, Walck., but is, I think, distinct from all the varieties of that variable species.

## ACROSOMA, Perty.

### **Acrosoma bimucronatum,** sp. n.

*Adult female*, length very nearly 3 lines (6 millim.).

*Cephalothorax* of normal form; colour yellow-brown, the greater part of the sides of the thorax dark reddish-brown.

*Eyes* in normal position. Central quadrangle forming a square, whose anterior side is shorter than the posterior; the hind-central eyes are much the largest, double the size of the fore-centrals, which are close to the lower margin of the clypeus.

*Legs* short, 4, 1, 2, 3, not very strong; the second pair nearly equal to the first. They are yellow-brown in colour, furnished with hairs and bristles, scarcely spines, properly so-called. The femora of the first and second pairs are furnished beneath with somewhat tuberculous-looking transverse ridges or eminences.

*Falces* strong, very roundly prominent at their base in front, where they are furnished with numerous strong bristly hairs, especially near their fore extremity on the inner side. Colour dark reddish-yellow-brown.

*Maxillæ*, *labium*, and *sternum* dark brown; the maxillæ have a pale border on the inner side, and the labium a pale apex.

*Abdomen* large, corneous, truncate before, the corners slightly prominent, double as wide behind as in front; upper surface flattish, each hind corner produced into a strong, tapering, sharp-pointed spur, whose length is equal to the length of the abdomen, and its base as broad as the interval between the bases of the two spurs. Colour pale orange-yellow, deepening into red-brown at the extremity of the spurs. The upperside is marked with numerous small sigilliform deep red-brown and blackish spots in the usual position. The abdomen is, as usual, prominent below, the spinners occupying a circular cavity with a deep red-brown corneous rim at the most prominent point; between the spinners and the bases of the

spurs the colour is deep blackish-brown, marked with somewhat quadrate orange spots, or it might be described as orange-yellow divided into quadrate spots by dark longitudinal and transverse lines. The underside is brown, deepening to black on the spiracular plates. Genital process not conspicuous, but of characteristic form.

*Hab.* GUATEMALA (*Sarg*).

## MODISIMUS, Simon.

### **Modisimus inornatus,** Cambr.

The female of this spider is described and figured, *anteà*, p. 149, t. 20. figg. 7, 7 *a–e*. I have since come across what I believe to be the male of the same species from the same locality, Teapa. It resembles the female in general appearance, size, colours, and markings, and is also closely allied to *Modisimus propinquus*, Cambr. (*anteà*, p. 223, t. 27. figg. 8, 8 *a–f*), but it differs in the form and structure of the palpal organs.

With respect to the structure of the genital aperture of *Modisimus inornatus*, I have now some reason to doubt whether the pale globular process noted in the description of that part (p. 149) is anything more than an outgrowth or accidental accretion.

## GELANOR, Thorell (*Galena*, C. L. Koch *).

### **Gelanor mixtus,** sp. n.

*Adult male*, length $2\frac{1}{4}$ lines; *adult female*, length a little over 3 lines.

In general form and appearance, as well as in colours and markings, this spider very closely resembles the type of the genus, *G. zonatus*, C. L. Koch; but the form and structure of the digital joints of the palpi and the palpal organs show a decided difference.

The *cephalothorax* is of a clear orange-yellow-brown colour, palest behind, with a faint transverse, reddish, divided marking near the occiput, and a more diffused one of the same hue on the sides (near the fore part) of the thorax.

The *eyes* are normal; the central quadrangle distinctly longer than broad, and its anterior side longer than the posterior.

*Legs* long, 1, 2, 4, 3, laterally expanded; those of the first two pairs of great length, and, except the femora, slender. The characteristic spiny armature on these legs is confined to the metatarsi, on which (of the first pair) there are four long spines, on the second three, the middle one of the latter being nearer (but not very near) to the posterior than to the anterior one. The colour of the legs is like that of the cephalothorax, with some brownish and rusty longitudinal markings on the posterior side of the femora, the markings on the first pair being of largest extent; the fore extremity of the tibiæ is clouded with red-brown.

*Palpi* very long and slender, of a brownish hue, deepening to dark brown on the radial joint; this joint is longer than the humeral, and nearly, if not quite, four times the length of the cubital, rather clavate, and has a row of spiny bristles round the inner side of the anterior margin. The digital joint is of moderate size and very irregular form: figures only will give a correct idea of its character. The palpal organs are not very complex, with several prominent corneous processes and spines.

*Falces* long, straight, not very powerful, and with the *maxillæ* and *labium*, which are of normal form, rather paler than the cephalothorax.

*Sternum* pale yellow, elongate heart-shape, drawn out into a point between the coxæ of the fourth pair of legs.

*Abdomen* short-oval, of a whitish hue, with two large round-oval clear white spots, narrowly margined with deep vermilion, tending to black on the fore side, in a transverse line and near together towards the

* Nomen præocc.

anterior extremity of the upperside; these are followed by several transverse narrow curved bands or stripes of a less clear white than the spots, but all with a narrow marginal line, both before and behind, of a vermilion colour, which colour also suffuses a space at the hinder extremity round the spinners.

The *female* resembles the male in general form and character; but the legs are shorter, and the characteristic spines are on the tibiæ of the first two pairs, as well as on the metatarsi, and the middle spine of the three long ones on the metatarsi of the second pair is more nearly equidistant from the other two.

The *maxillæ*, *labium*, and *sternum* are dark yellow-brown.

The *abdomen* is similarly marked to that of the male; but there seems to be considerable variation in the extent and distinctness of the markings in different examples, and the suffusion round the spinners is deeper in hue and takes a more regular form, having three strong prominent points above and underneath, and extending in front of the spinners along the underside of the abdomen. The colour of this also varies from dull vermilion through rust-red to brown; probably a series of specimens would show similar variations in the male. The genital aperture is of characteristic form, but has a general resemblance to that of *G. zonatus*.

*Hab.* GUATEMALA (*Sarg*: ♂); PANAMA, Bugaba (*Champion*: ♀).

## **Gelanor medius,** sp. n.

*Adult male*, length $2\frac{1}{2}$ lines; *adult female*, length $2\frac{3}{4}$ lines.

This spider is very nearly allied to *G. mixtus*, and resembles it closely in colours and markings.

The *cephalothorax* is yellow, tinged with yellow-brown.

The *eyes* of the posterior row form a distinct curve whose convexity is directed backwards. The central quadrangle is but little broader than long.

The *legs* are long, slender, 1, 2, 4, 3. Colour yellow to yellow-brown on the femora and genuæ; a tolerably well-defined annulus at the fore extremity of the tibiæ and the metatarsi of the first pair yellow-brown. The femora of the first pair have a well-defined dark longitudinal line along the inner side. Armature as in *G. mixtus*.

*Palpi* long, slender; colour yellow-brown, deepening to dark reddish-yellow-brown at the lower half of the humeral joint and the anterior half of the radial joint. The form of the digital joint is very irregular, but differs distinctly from that of *G. mixtus*, as also do the form and structure of the palpal organs.

*Falces*, *maxillæ*, and *sternum* similar in colour to the cephalothorax. *Labium* tinged with brown.

*Abdomen* similar in general pattern to that of *G. mixtus*, but the white spots on the fore part are much smaller and of a kidney-shape, and, as well as the transverse bands, less distinctly and vividly margined with vermilion; but this may well vary in different examples, and the patch around the spinners has its fore part composed of three triangular patches meeting in the broad longitudinal dark band of the underside, which, in the example described, is very indistinct.

The *female* has the abdominal markings much more vivid and distinct. The *cephalothorax*, *falces*, *maxillæ*, *labium*, and *sternum* are yellow-brown. The *legs* yellow; the femora of the first pair with dark brown along the inner side, and those of the second pair with a well-defined dark elongate patch in front of the anterior half. The armature of the legs as in *G. mixtus*, ♀. The genital aperture much resembles that of *G. mixtus*, but is characteristically distinct.

*Hab.* GUATEMALA, Chiacam (♀), Menché (Rio Usumacinta) (♂ & ♀) (*Sarg*).

## **Gelanor distinctus,** sp. n.

*Adult female*, length $2\frac{1}{2}$ lines.

This species, while bearing close resemblance in general form and markings on the abdomen, differs from all others known to me by the broad, central, longitudinal, tapering, distinctly defined, deep yellow-brown band on the cephalothorax. This band (on a pale yellow ground-colour) embraces the ocular area, and extends to the thoracic indentation (with somewhat irregularly dentated margins) in a more or less obtuse point, whence it again enlarges and continues to the posterior margin. On the sides of the thorax, and also on its margin near the junction of the caput and thorax, are two rather dark yellow-brown spots or markings.

The *eyes* are fairly normal; but the central quadrangle is perhaps rather longer in proportion to its width than in some other species of the genus, and the posterior row less curved.

The *legs* are yellow; the anterior portion of the tibiæ, as well as each end of the genuæ, and the posterior sides of the femora of the first and second pairs, are more or less marked with dark yellow-brown; the three normal long spines on the inner side of the metatarsi of the second pair are present, but the two nearest the base of the joint are close together and widely separate from the anterior one, that nearest the base being much the smallest and shortest of the three.

The *falces* are tolerably strong, straight, a little prominent in front near the base, and of a yellow-brown colour.

The *maxillæ* and *labium* are paler yellow-brown than the falces.

The *sternum* is yellow, with a transverse stripe across the fore part, and some spots on the margin of a dark yellow-brown hue.

The *abdomen* is short, broad-oval, approaching a globular form. It is of a whitish hue, with two narrow-oval white spots near together, but not contiguous, in a transverse line on the fore part of the upperside; these are followed by some dusky blackish markings along the median line, but the bright carmine colours and lines so vivid on the abdomen of some other species of the genus seem to be almost, if not quite, obsolete here. The spinners are surrounded both before and behind with a yellow-brown or rusty-coloured area, and there is also a large confluent patch of the same colour on each side and a little in front of them. The genital aperture bears a general resemblance to that of some other species of the genus, but is distinct and apparently most like that of *G. ornatus*, C. L. Koch.

*Hab.* PANAMA, Bugaba (*Champion*).

## **Gelanor errans,** sp. n.

*Adult female*, length $1\frac{3}{4}$ lines; *adult male*, $1\frac{1}{2}$ lines.

*Cephalothorax* (in both sexes) pale yellow, marked with a few indistinct yellow-brownish spots.

*Eyes* normal.

*Legs* of the female yellow. The femora of the first and second pairs have a longitudinal dark rusty-brown line on the hinder side and a less dark larger marking on the inner side. The genuæ and fore extremity of the tibiæ also are marked with a similar colour. The inner side of the hinder end of the metatarsi of the second pair has the characteristic three long spines; but the first and second are close together, with no other between them, while the second and third are very wide apart and have six other spines between them of graduated lengths.

*Falces*, *maxillæ*, and *labium* normal and yellowish in colour.

*Sternum* yellow, with a dark transverse line in front and two smaller oblique ones behind.

*Abdomen* short, broad-oval, of a whitish colour, with the two white oval spots and transverse lines almost obsolete, being faintly indicated by slender carmine and dark hues. The dark area and patches at the spinners are well marked and of a rusty-brown colour. The genital aperture, while bearing a general resemblance to that of other species of the genus, is yet characteristically distinct.

The *male* examined had evidently not long become adult, and thus the less distinct markings on the cephalothorax and legs may be accounted for. The markings also on the abdomen were almost obsolete, excepting those on the sides of and surrounding the posterior extremity, which were of a blackish hue.

The *palpi* are (like those of this sex in other species of the genus) very long and slender. The anterior part of the radial joint is strongly clavate, with three very strong spur-like bristles near together in a longitudinal line near the fore end, besides the normal ones round and near the fore margin; in the adult males of *G. mixtus* and *G. medius* (*anteà*, pp. 303, 304) I could find only two bristles at this point. These species also differ in the position of the three spines at the base of the metatarsi of the second pair of legs; and the present species differs also distinctly in the form of the digital joint and palpal organs.

I have noted in the description of the male of *G. mixtus* (p. 303) that the characteristic spiny armature of the tibiæ and metatarsi of the first and second pairs of legs in the female is wanting in the former joint in the male of that species, being found only on the metatarsi. This is the case also in respect to the males of *G. medius* and the present species, and it seems difficult to account for it, as usually any spiny armature in the female is present, and probably exaggerated, in the male—possibly, if defensive or offensive, the

full complement of armature may have become less necessary to the male; the male, however, in the immature state possesses the same number of spines on these legs as the female.

*Hab.* PANAMA, Bugaba (*Champion*).

### **Gelanor consequus,** sp. n.

*Adult female*, length $1\frac{3}{4}$ to 2 lines.

This species is of normal form and appearance, and is closely allied to those already described.

The *cephalothorax* is yellow, the caput slightly tinged with dull orange.

The *eyes* of the posterior row form a distinct but not strong curve, whose convexity is directed backwards. The central quadrangle is distinctly longer than broad, and its anterior much longer than the posterior side.

The *legs* are yellow, slightly tinged with red-brown on the inner side of the femora and at the fore extremity of the tibiæ of the first and second pairs, and a longitudinal faint red-brown line runs along the hinder side of the femora of those pairs. The three long spines on the metatarsi of the second pair are placed as in *G. errans* and *G. distinctus*.

*Falces* dull orange-yellow, a little prominent in front.

*Maxillæ*, *labium*, and *sternum* yellow, the latter without markings.

*Abdomen* very broad-oval, broader than long, of a dull whitish colour, the two oval white spots in front rather small, edged with carmine, and followed by some more or less distinct transverse carmine lines; just above the spinners are two curved white spots in a transverse line meeting at their inner ends; sides white; the dark space round the spinners continuous, but dentated above them, and tinged there more or less at times with carmine. Genital aperture of distinct form, though bearing a general resemblance to that of others of the genus.

*Hab.* PANAMA, Bugaba (*Champion*).

## TEUTANA, Simon.

### **Teutana zonata,** Keys.

The male only of this spider is described and figured by Keyserling ('Die Spinnen Amerikas,' Theridiidæ, i. Halfte, p. 127, t. 6. fig. 80) from Mexico.

*Adult female*, length $3\frac{1}{3}$ lines.

The *cephalothorax*, *legs*, *palpi*, *falces*, *maxillæ*, *labium*, and *sternum* are of a uniform yellow-brown colour.

*Eyes* of the posterior row very nearly equidistant from each other, the centrals perhaps rather nearer to each other than to the laterals, the interval being about, or a little less than, a diameter. The two rows are near to each other. The central quadrangle broader than long, and slightly narrowest in front. The hind-central eyes about equal in size to the fore-laterals, and the fore-centrals smallest. The height of the clypeus is two-thirds that of the facial space.

The *abdomen* is blackish, with a curved whitish transverse band or stripe near the front, followed by two others of a pale dull hue more or less covered with small white spots, and after them to the spinners two or three indistinct whitish spots or patches on the median line, being as nearly as possible like those of the male, only of a more diffused and less distinct pattern. The genital aperture is of a transverse narrow-oval or kidney shape.

The *male* is of a clearer brighter yellow on all the fore parts than the female, and the markings on the abdomen are better defined.

*Hab.* GUATEMALA (*Sarg*).

## LINYPHIA, Latreille, ad partem.

### **Linyphia confinis,** sp. n.

*Adult female*, very nearly $2\frac{1}{2}$ lines.

Of ordinary general form and structure.

*Cephalothorax* dark yellow-brown.

*Eyes* of posterior row forming a curve whose convexity is directed backwards ; the hind-centrals are a diameter's distance apart, and considerably nearer to each other than to the hind-laterals. Central quadrangle scarcely longer than broad, and its anterior side slightly shorter than the posterior ; height of clypeus about half that of the facial space.

*Legs* moderately long, 1, 4, 2, 3. Colour brownish-yellow, tinged with reddish ; the anterior extremities of the tibiæ and metatarsi have the rim red-brown. Spines few and slender.

*Falces* strong and a little prominent in front about the middle. Colour yellow-brown.

*Maxillæ* paler than the falces.

*Labium* and *sternum* dark yellow-brown.

*Abdomen* oval ; high, and somewhat produced at its hinder extremity, which slightly projects over the spinners, but is less caudiform than that of *L. læta*, Cambr. The upperside is closely mottled with minute somewhat cream-white spots ; a longitudinal central dull brown line, with some small lateral prominences, occupies the median line of the anterior half ; at the hinder extremity above is a large black subtriangular marking, whose apex is truncated, the interval between this and the spinners being black. The sides have a large black area forwards, and the underside is black-brown, divided from the sides by a row of indistinct whitish spots and markings. The genital aperture is small, of a somewhat kidney-shaped transverse form.

*Hab.* GUATEMALA (*Sarg*).

## PHYLLONETHIS, Thorell (*Theridion*, Walckenaer, ad partem).

### **Phyllonethis trepida,** Cambr. (sub *Theridion*).

The adult female of this species was described (*anteà*, p. 256). I have since come across a specimen of the male.

*Adult male*, length $1\frac{1}{4}$ to $1\frac{1}{2}$ lines.

The male resembles the female in colours and in the pattern on the cephalothorax and abdomen ; but the legs are longer, especially those of the first pair : the 1st, 2nd, and 4th pairs have a more or less deep and well-defined black-brown to reddish-brown annulus at the fore-extremity of the tibiæ, and the 1st and 2nd pairs have also one at the fore end and middle of the femora, and one also at the middle of the tibiæ and metatarsi of the first pair, and a smaller annulus or spot at the fore end and middle of the tibiæ and fore end of the metatarsi of the second pair. The legs are thus more or less sparsely annulated, with probably some variation in different examples.

The *falces* are long, divergent, with a strong tooth-like prominence towards their base on the outer side, and another still more tooth-like prominence on the inner margin towards the fore extremity.

The height of the clypeus slightly exceeds half that of the facial space.

The *palpi* are moderately long, pale yellow, the cubital and radial joints are both short, the former with long bristles in front, the latter strongest and considerably produced at the fore extremity on the outer side, the produced portion having its outer edge fringed with a row of long, strong, tapering, curved bristles. The digital joint is oval and of moderate size, and furnished with long bristly hairs ; the palpal organs are compact and not very complex, with a prominent, pointed, corneous process near the extremity ; the humeral joint has along its outer side a row of strongish bristly hairs, each springing from a minute tubercle.

The *maxillæ* are long, strong, a little enlarged towards the extremities, which are obliquely truncate on the outer side and inclined towards the labium.

The *labium* is broader than high and of a somewhat subtriangular form.

*Hab.* MEXICO, Amula and Omilteme in Guerrero (*H. H. Smith*).

It may not be easy to determine with certainty the generic position of the female by itself of a species of this group, but the adult males in the peculiar development and armature of the falces and the strength and length of the maxillæ are very conspicuous, and easily separated from the typical *Theridion*.

## MALLOS *, gen. nov. (fam. Dictynidæ; subfam. Amaurobiinæ).

*Cephalothorax* long, narrow, oblong-oval; lateral marginal indentations at the caput slight but distinct. Caput long, the normal thoracic indentation being a long way back, deep, and transverse. Upper convexity moderate. Caput not raised, broadish, and truncate before; height of the clypeus less than half that of the facial space.

*Eyes* of nearly equal size, in two transverse curved rows occupying the whole width of the caput; the posterior row is nearly straight, the convexity of its very slight curve directed forwards; the curve of the anterior row (which is nearly equal to the posterior in length) much stronger, but in the same direction. The intervals between those of the posterior row are equal. The central quadrangle forms a square, except that its fore side is a little shorter than the rest, and its eyes divided by a diameter's interval, being nearer to each other than to the fore-laterals. The lateral pairs are each on a strong tubercle, and placed a little obliquely, the interval between them being rather less than half a diameter of the anterior eye.

*Legs* moderately strong, not very long, 1, 2, 4, 3, without spines or strong bristles, with fine hairs only. Terminal tarsal claws 3, dentated: superior long, strongly curved, rather slender; inferior short and stout, with some small opposed supernumerary ones beneath. Tarsi of 1st pair long, those of 4th pair very short.

*Falces* tolerably strong, straight, vertical; some minute teeth in a longitudinal row visible along the inner margin in front of the fang when at rest.

*Maxillæ* moderately long, broad, obliquely and a little roundly truncate at the extremity, considerably inclined towards the labium.

*Labium* broader at the base than high, of a somewhat subtriangular form, rounded on the sides, considerably truncated at the apex, and a little longer than half the length of the maxillæ.

*Sternum* short-oval, a little longer than broad, broadly truncate before, and drawn out into a rather blunt point between the coxæ of the fourth pair of legs.

*Abdomen* oval, blunt at each end, moderately convex above; spinners strong, rather long, extended in a line parallel to the abdomen, those of the inferior pair a little longest and strongest, the central pair very small and difficult to see; the infra-mamillary organ is undivided and occupies the whole width of the abdomen close to the inferior spinners, where it forms a raised transverse ridge with the top truncated; anal prominence long, prominent, pointed; just in front of this organ is a strong, somewhat curved, conspicuous transverse fold in the epidermis, apparently covering one or two entrances to spiracular organs; this fold is fringed in front with white hairs.

### **Mallos niveus,** sp. n.

*Immature male*, length $1\frac{1}{2}$ lines.

*Cephalothorax* pale brownish-yellow; caput behind the ocular area deep brown; sides of the thorax brownish, with dark brown converging dashes; margins of the thorax of a well-defined vivid white. Clypeus and occiput furnished with longish, coarse, grey-white hairs, some forming a straight, longitudinal, median streak from the middle of the ocular area to the thoracic indentation.

*Falces* pale brownish-yellow, the basal portion yellow-brown.

*Legs* pale yellow, furnished thinly with very fine pale hairs, a few coarse darker ones at the anterior extremity of the metatarsi and tarsi; at the fore extremity, in front of the metatarsi, is a roundish or oval impression, with a deep reddish-brown corneous edge, perhaps the "lorum articulare" of M. Simon (Hist. des Araign. p. 22); a strong calamistrum runs along nearly the whole length of the hinder side of the metatarsi of the fourth pair.

*Palpi* pale whitish-yellow, short, the still tumid and undeveloped digital joint of large size.

*Maxillæ* pale yellowish, with a stain of yellow-brown on the inner side near the extremity.

*Labium* yellowish-brown.

*Sternum* dark brown, the margins black, clothed thinly with coarse grey-white hairs.

*Abdomen* white above, clothed with grey-white hairs, clouded with grey in a dentate form, and with two or three blackish stain-like spots on it along the lateral margins; a longitudinal black marking, broadest behind, occupies the median line of the fore end; this mark is deeply indented on each side towards the

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* Nom. propr.

hinder part, and is blackish on its margin; it recalls strongly the characteristic marking, on the same part, of some spiders of the genus *Amaurobius*; at the hinder end of the abdomen are two transverse, prominent, truncated, somewhat spinner-like, clear white projections close side by side to each other and clothed with white hairs; they are close above the anal prominence, and have the superficial appearance of short spinners, and under a $\frac{1}{2}$-in. objective look as if segmentate; on each side a little forwards are two more such prominences of smaller size, and as if seated along the edge of a projecting ridge of the abdomen. The sides are white; the underside black, covered with short grey hairs.

The basal half of the inferior pair of spinners has, in the middle, a large patch of spines and long bristles, whose function is, presumably, to card out the adhesive silk from the infra-mamillary organ; at any rate they are exactly situated for such a function.

*Hab.* MEXICO, Amula in Guerrero (*H. H. Smith*).

The affinities of this remarkable spider are evidently with *Amaurobius* and its congeners, but it differs in some very strong respects. Although immature, I have no hesitation in making it the type of a new genus.

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[Names in small capitals refer to Families, &c.; those in roman type to the chief reference to each species included in the work; those in italics to species incidentally mentioned, synonyms, &c.]


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RED LION COURT, FLEET STREET.

## PLATE I.

Fig. 1. *Meta alboguttata*, ♂ : 1 *a*, profile without legs or palpi; 1 *b* and 1 *c*, palpus in two positions.

2. *Meta alboguttata*, ♀ : 2 *a*, profile without legs or palpi; 2 *b*, front view of genital process; 1 *d*, profile of ditto.

3. *Meta brevipes*, ♀ : 3 *a*, profile without legs or palpi; 3 *b*, genital process from in front.

4. *Meta decolorata*, ♀ : 4 *a*, profile without legs or palpi; 4 *b*, genital process from in front; 4 *c*, ditto in profile.

5. *Meta globosa*, ♀ : 5 *a*, profile without legs or palpi; 5 *b*, underside of ditto; 5 *c*, genital process from in front.

6. *Argyroepeira acuminata*, ♀ : 6 *a*, profile without legs or palpi; 6 *b*, genital process from in front.

7. *Argyroepeira idonea*, ♀ : 7 *a*, profile without legs or palpi; 7 *b*, genital process from in front.

8. *Argyroepeira lepida*, ♀ : 8 *a*, profile without legs or palpi; 8 *b*, genital process from in front.

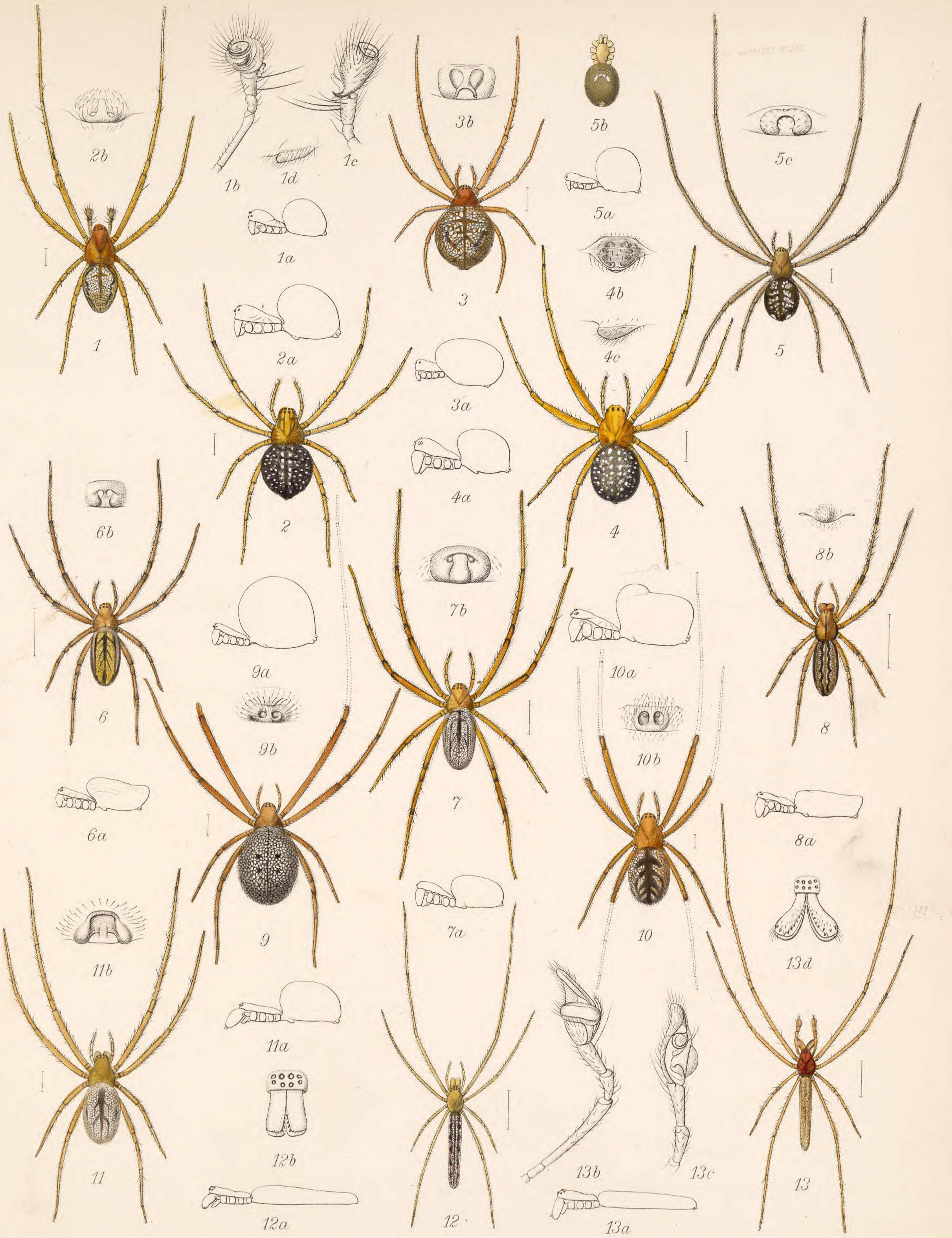
9. *Argyroepeira debilis*, ♀ : 9 *a*, profile without legs or palpi; 9 *b*, genital process from in front.

10. *Argyroepeira curta*, ♀ : 10 *a*, profile without legs or palpi; 10 *b*, genital process from in front.

11. *Argyroepeira fragilis*, ♀ : 11 *a*, profile without legs or palpi; 11 *b*, genital process from in front.

12. *Tetragnatha tenuis*, ♀ : 12 *a*, profile without legs or palpi; 12 *b*, front view of eyes and falces.

13. *Tetragnatha tenuis*, ♂ : 13 *a*, profile without legs or palpi; 13 *b* and 13 *c*, palpus in two positions; 13 *d*, eyes and falces from in front.




1, 1 a-d ♂ META ALBOGUTTATA.
2, 2 a, b ♀ „ „
3, 3 a, b ♀ „ BREVIPES.
4, 4 a-c ♀ „ DECOLORATA.

5, 5 a-c ♀ META GLOBOSA.
6, 6 a, b ♀ ARGYROEPEIRA ACUMINATA.
7, 7 a, b ♀ „ IDONEA.
8, 8 a, b ♀ „ LEPIDA.
9, 9 a, b ♀ „ DEBILIS.

10, 10 a, b ♀ ARGYROEPEIRA CURTA.
11, 11 a, b ♀ „ FRAGILIS.
12, 12 a, b ♀ TETRAGNATHA TENUIS.
13, 13 a-d ♂ „ „

A.T. Hollick del.

Lith. & Imp. Camb. Sci. Inst. Co.

## PLATE II.

Fig. 1. *Eugnatha gracilis*, ♂ : 1 *a*, profile without legs or palpi ; 1 *b*, eyes and falces from in front ; 1 *c* and 1 *d*, palpus in two positions.

2. *Eugnatha gracilis*, ♀ : 2 *a*, profile without legs or palpi ; 2 *b*, eyes and falces from in front.

3. *Tetragnatha tropica*, ♀ : 3 *a*, profile without legs or palpi ; 3 *b*, eyes and falces from in front.

4. *Tetragnatha longa*, ♂ : 4 *a*, profile without legs or palpi ; 4 *b*, eyes and falces from in front ; 4 *c* and 4 *d*, palpus in two positions.

5. *Tetragnatha longa*, ♀ : 5 *a*, profile without legs or palpi ; 5 *b*, eyes and falces from in front.

6. *Tetragnatha guatemalensis*, ♂ : 6 *a*, profile without legs or palpi ; 6 *b*, falces and eyes from in front ; 6 *c* and 6 *d*, palpus in two positions.

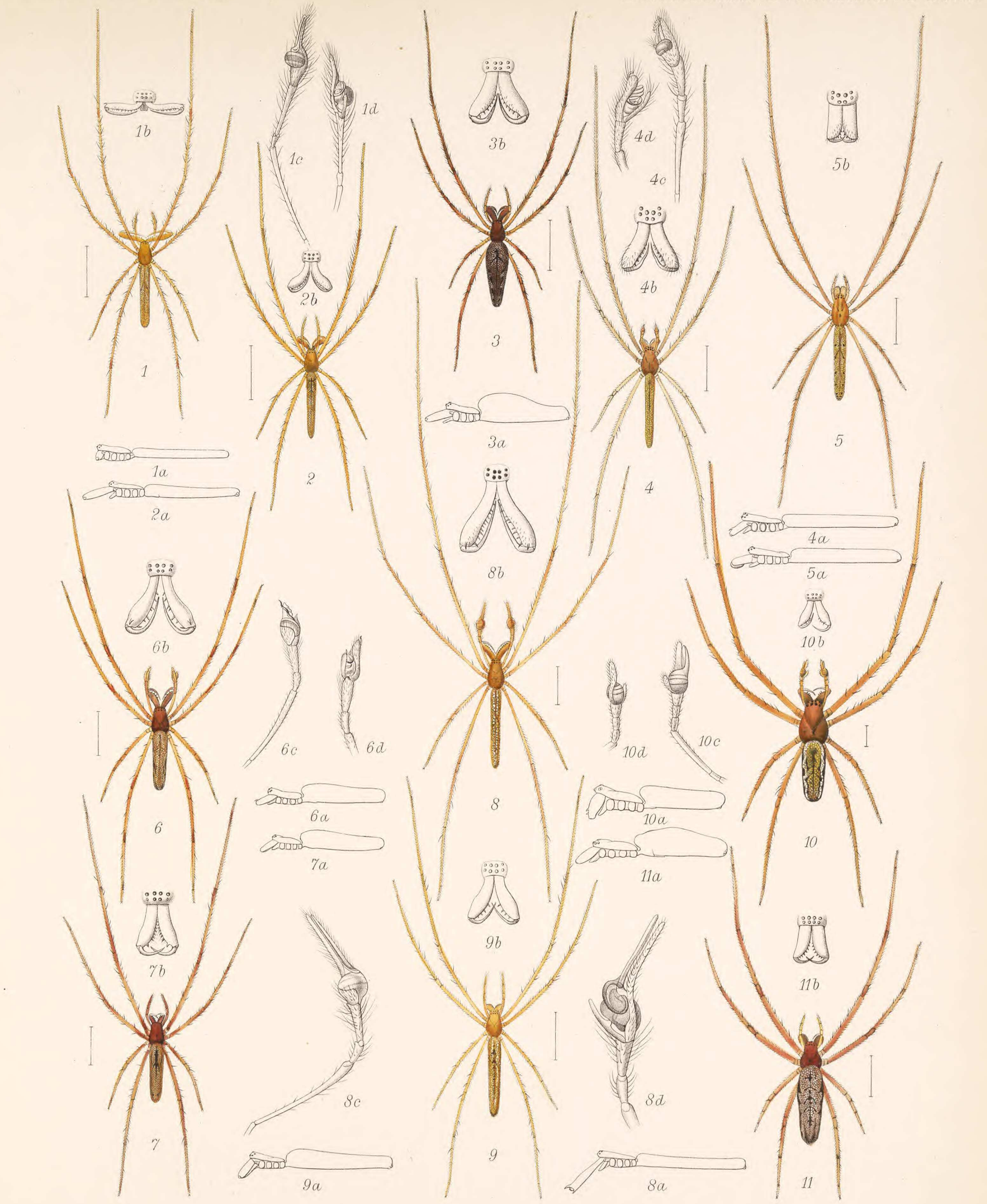
7. *Tetragnatha guatemalensis*, ♀ : 7 *a*, profile without legs or palpi ; 7 *b*, eyes and falces from in front.

8. *Tetragnatha pallida*, ♂ : 8 *a*, profile without legs or palpi ; 8 *b*, eyes and falces from in front ; 8 *c* and 8 *d*, palpus in two positions.

9. *Tetragnatha pallida*, ♀ : 9 *a*, profile without legs or palpi ; 9 *b*, eyes and falces from in front.

10. *Tetragnatha cognata*, ♂ : 10 *a*, profile without legs or palpi ; 10 *b*, eyes and falces from in front ; 10 *c* and 10 *d*, palpus in two positions.

11. *Tetragnatha cognata*, ♀ : 11 *a*, profile without legs or palpi ; 11 *b*, eyes and falces from in front.




1, 1 a-d ♂ EUGNATHA GRACILIS.
2, 2 a, b ♀. " "
3, 3 a, b ♀ TETRAGNATHA TROPICA.
4, 4 a-d ♂ " LONGA.
5, 5 a, b ♀ TETRAGNATHA LONGA.
6, 6 a-d ♂ " GUATEMALENSIS.
7, 7 a, b ♀ " "
8, 8 a-d ♂ TETRAGNATHA PALLIDA.
9, 9 a, b ♀ " "
10, 10 a-d ♂ " COGNATA.
11, 11 a, b ♀ "

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## PLATE III.

Fig. 1. *Tetragnatha tenuissima*, ♂ : 1 *a*, profile without legs or palpi ; 1 *b*, eyes and falces from in front ; 1 *c* and 1 *d*, palpus in two positions.

2. *Tetragnatha tenuissima*, ♀ : 2 *a*, profile without legs or palpi ; 2 *b*, eyes and falces from in front.

3. *Azilia guatemalensis*, ♂ : 3 *a* and 3 *b*, palpus in two positions.

4. *Azilia guatemalensis*, ♀ : 4 *a*, profile without legs or palpi ; 4 *b*, eyes and falces from in front ; 4 *c*, genital process from in front.

5. *Mangora picta*, ♂ : 5 *a* and 5 *b*, palpus in two positions ; 5 *c*, eyes from in front.

6. *Mangora picta*, ♀ : 6 *a*, profile without legs or palpi ; 6 *b*, genital process from in front ; 6 *c*, ditto in profile.

7. *Mangora trilineata*, ♀ : 7 *a*, genital process from in front ; 7 *b*, ditto in profile.

8. *Mahadiva* 11-*variolata*, ♂ : 8 *a* and 8 *b*, palpus in two positions ; 8 *c*, one of the 2nd pair of legs, enlarged.

9. *Mahadiva* 11-*variolata*, ♀ : 9 *a*, profile without legs or palpi ; 9 *b*, genital process from in front ; 9 *c*, ditto in profile.

10. *Mahadiva reticulata*, ♂ : 10 *a* and 10 *b*, palpus in two positions ; 10 *c*, one of 2nd pair of legs, enlarged.

11. *Amamra bituberosa*, ♀ : 11 *a*, profile without legs or palpi ; 11 *b*, eyes and falces from in front ; 11 *c*, underside showing maxillæ, labium, and sternum ; 11 *d*, genital process from in front ; 11 *e*, ditto in profile.

12. *Kaira gibberosa*, ♀ : 12 *a*, profile without legs or palpi ; 12 *b*, abdomen from behind ; 12 *c*, eyes and falces from in front ; 12 *d*, underside showing maxillæ, labium, and sternum ; 12 *e*, genital process from in front.

13. *Kaira altiventer*, ♀ : 13 *a*, profile without legs or palpi ; 13 *b*, eyes and falces from in front ; 13 *c*, genital process from in front ; 13 *d*, ditto in profile.

Inches 1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Centimetres
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak
LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

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1, 1a-d ♂ TETRAGNATHA TENUISSIMA. 5, 5a-c ♂ MANGORA PICTA.
2, 2a, b ♀ " " 6, 6a-c ♀ " "
3, 3a, b ♂ AZILIA GUATEMALENSIS. 7, 7a, b ♀ " TRILINEATA.
4, 4a-c ♀ " " 8, 8a-c ♂ MAHADIVA 11-VARIOLATA.
9, 9a-c ♀ " "
10, 10a-c ♂ MAHADIVA RETICULATA.
11, 11a-e ♀ AMAMRA BITUBEROSA.
12, 12a-e ♀ KAIRA GIBBEROSA
13, 13a-d ♀ " ALTIVENTER.

*Geol. Surv. Ohio.* *Arachnida Araneidea. Tab. 3.*

## PLATE IV.

Fig. 1. *Edricus spinigerus*, ♂ : 1 *a*, profile with legs truncated ; 1 *b*, eyes and falces from in front ; 1 *c*, maxillæ, labium, and sternum, the legs truncated ; 1 *d* and 1 *e*, palpus in two positions ; 1 *f*, leg of 2nd pair.

2. *Keyserlingia cornigera*, ♂ : 2 *a*, profile with legs truncated ; 2 *b*, eyes and falces from in front ; 2 *c*, maxillæ, labium, and sternum ; 2 *d* and 2 *e*, palpus in two positions.

3. *Alpaida conica*, ♀ : 3 *a*, profile with legs truncated ; 3 *b*, eyes and falces from in front ; 3 *c*, maxillæ, labium, and sternum ; 3 *d*, genital aperture from above ; 3 *e*, ditto in profile.

4. *Cyrtarachne* 10-*tuberculata*, ♂ : 4 *a*, profile with legs truncated ; 4 *b* and 4 *c*, palpus in two positions.

5. *Argiope trivittata*, ♂ : 5 *a*, profile with legs truncated ; 5 *b*, maxillæ, labium, and sternum ; 5 *c* and 5 *d*, palpus in two positions.

6. *Argiope trivittata*, ♀ : 6 *a*, profile with legs truncated ; 6 *b*, maxillæ, labium, and sternum ; 6 *c*, genital process from above ; 6 *d*, ditto in profile.

7. *Carepalxis americana*, ♂ : 7 *a*, profile with legs truncated ; 7 *b* and 7 *c*, palpus in two positions.

8. *Carepalxis americana*, ♀ : 8 *a*, profile with legs truncated ; 8 *b*, eyes and falces from in front ; 8 *c*, genital process from above.

9. *Carepalxis tuberculifera*, ♀ : 9 *a*, profile with legs truncated ; 9 *b*, genital process from above.

10. *Carepalxis gibbosa*, ♀ : 10 *a*, profile with legs truncated ; 10 *b*, eyes and falces from in front.

11. *Turckheimia nodosa*, ♀ : 11 *a*, profile without legs ; 11 *b*, outline of underside of abdomen.

12. *Epeira rufipes*, ♀ : 12 *a*, profile with legs truncated ; 12 *b*, genital process from above ; 12 *c*, ditto in profile.

13. *Epeira destricta*, ♂ : 13 *a*, profile with legs truncated ; 13 *b* and 13 *c*, palpus in two positions.

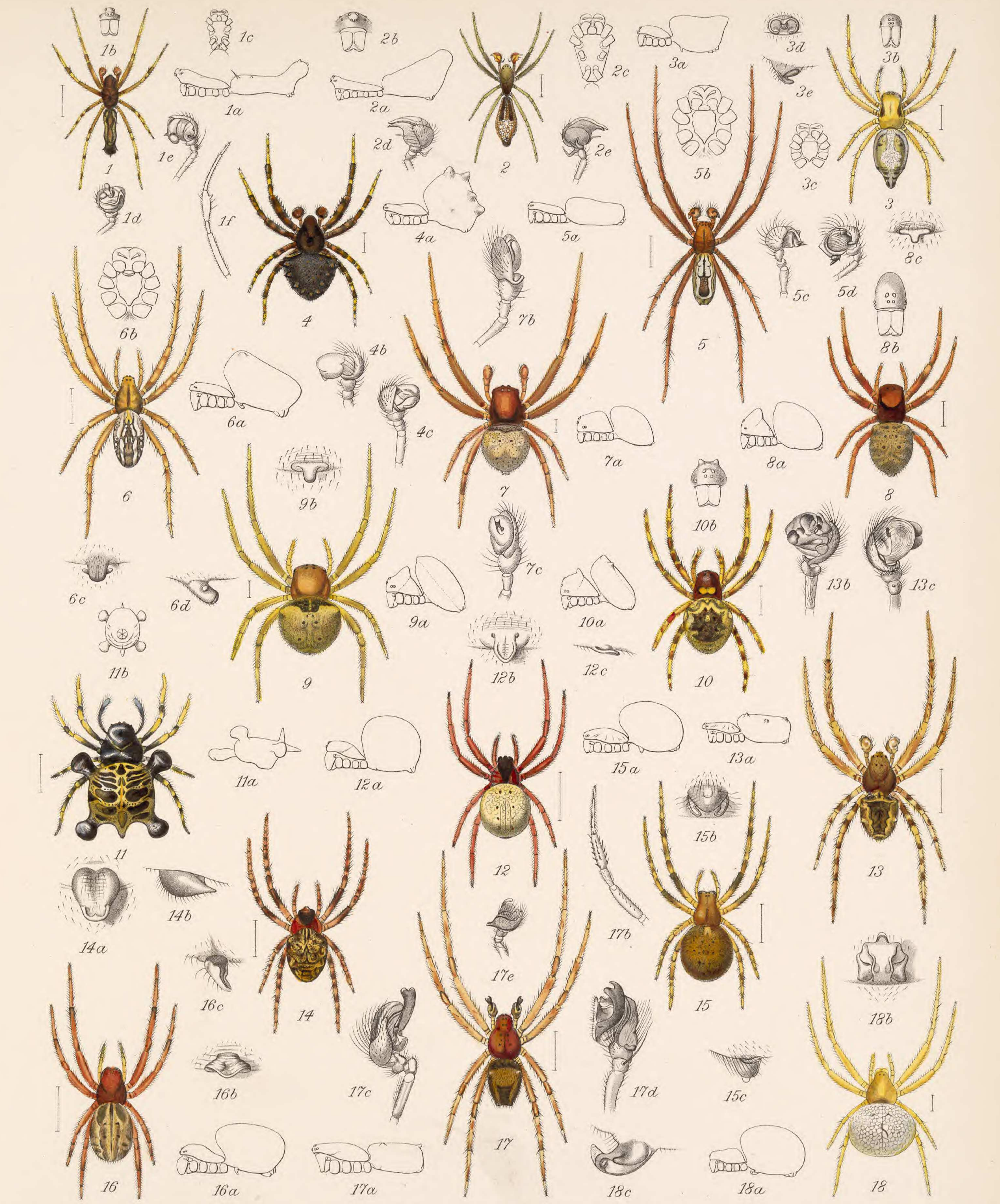
14. *Epeira destricta*, ♀ : 14 *a*, genital process from above ; 14 *b*, ditto in profile.

15. *Epeira incerta*, ♂ : 15 *a*, profile with legs truncated ; 15 *b*, genital process from above ; 15 *c*, ditto in profile.

16. *Epeira laticeps*, ♀ : 16 *a*, profile with legs truncated ; 16 *b*, genital process from above ; 16 *c*, ditto in profile.

17. *Epeira armata*, ♀ : 17 *a*, profile with legs truncated ; 17 *b*, leg of 2nd pair ; 17 *c*, 17 *d*, and 17 *e*, palpus in three positions.

18. *Epeira fragilis*, ♀ : 18 *a*, profile with legs truncated ; 18 *b*, genital process from above ; 18 *c*, ditto in profile.



1, 1 a-f, ♂ EDRICUS SPINIGERUS.
2, 2 a-e, ♂ KEYSERLINGIA CORNIGERA.
3, 3 a-e, ♀ ALPAIDA CONICA.
4, 4 a-c, ♂ CYRTARACHNE 10-TUBERCULATA.
5, 5 a-d, ♂ ARGIOPE TRIVITTATA.
6, 6 a-d, ♀ " "
7, 7 a-c, ♂ CAREPALXIS AMERICANA.
8, 8 a-c, ♀ " "
9, 9 a, b, ♀ " TUBERCULIFERA.
10, 10 a, b, ♀ " GIBBOSA.
11, 11 a, b, ♀ TURCKHEIMIA NODOSA.
12, 12 a-c, ♀ EPEIRA RUFIPES.
13, 13 a-c, ♂ EPEIRA DESTRICTA
14, 14 a, b, ♀ " "
15, 15 a-c, ♀ " INCERTA.
16, 16 a-c, ♀ " LATICEPS.
17, 17 a-e, ♀ " ARMATA.
18, 18 a-c, ♀ " FRAGILIS.

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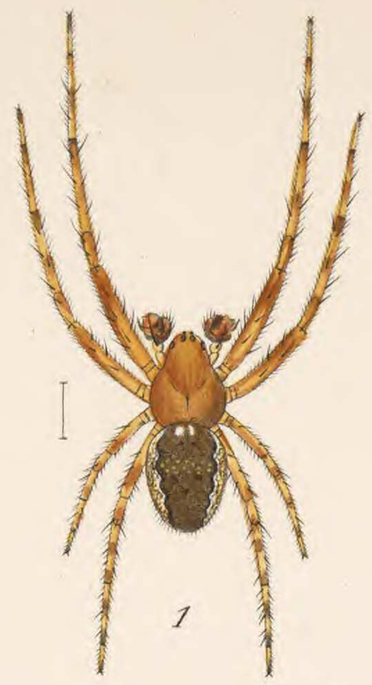
## PLATE V.

Fig. 1. *Epeira helvola*, ♂ : 1 *a*, spider in profile; 1 *b* and 1 *c*, palpus in two positions.
2. *Epeira helvola*, ♀ : 2 *a*, genital process from in front; 2 *b*, ditto in profile.
3. *Epeira gregalis*, ♀ : 3 *a*, spider in profile; 3 *b*, genital process from in front; 3 *c*, ditto in profile.
4. *Epeira passiva*, ♀ : 4 *a*, spider in profile; 4 *b*, genital process from in front; 4 *c*, ditto in profile.
5. *Epeira rigida*, ♀ : 5 *a*, spider in profile; 5 *b*, genital process from in front; 5 *c*, ditto in profile.
6. *Epeira hoxæa*, ♀ : 6 *a*, spider in profile; 6 *b*, genital process from in front; 6 *c*, ditto in profile.
7. *Epeira gravabilis*, ♀ : 7 *a*, spider in profile; 7 *b*, genital process from in front; 7 *c*, ditto in profile.
8. *Epeira hypocrita*, ♂ : 8 *a*, spider in profile; 8 *b* and 8 *c*, palpus in two positions; 8 *d*, one of second pair of legs enlarged.
9. *Epeira spinigera*, ♂.
10. *Epeira spinigera*, ♀ : 10 *a*, spider in profile; 10 *b*, genital process from in front; 10 *c*, ditto in profile.
11. *Epeira intercisa*, ♂ : 11 *a* and 11 *b*, palpus in two positions.
12. *Epeira championi*, ♂ : 12 *a* and 12 *b*, palpus in two positions.
13. *Epeira championi*, ♀ : 13 *a*, spider in profile; 13 *b*, genital process from in front; 13 *c*, ditto in profile.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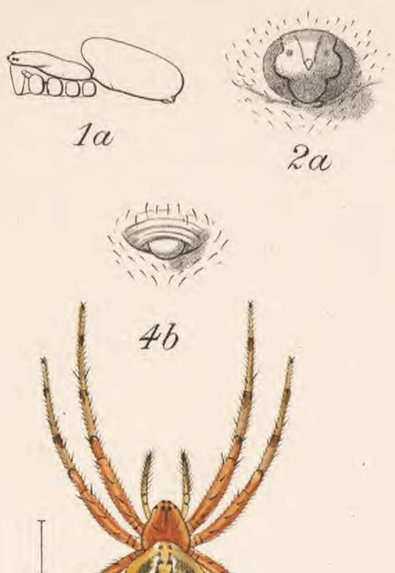
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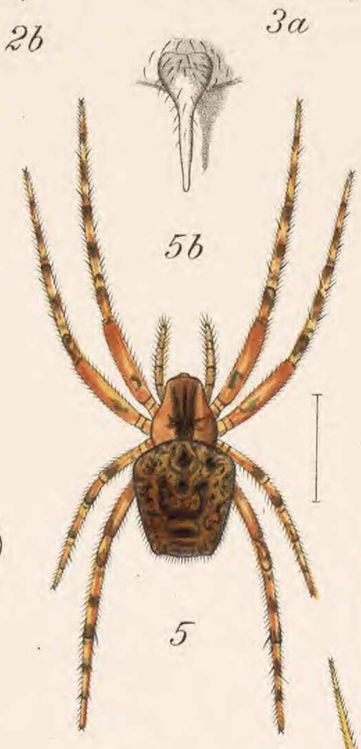
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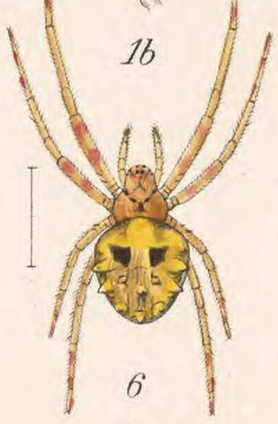
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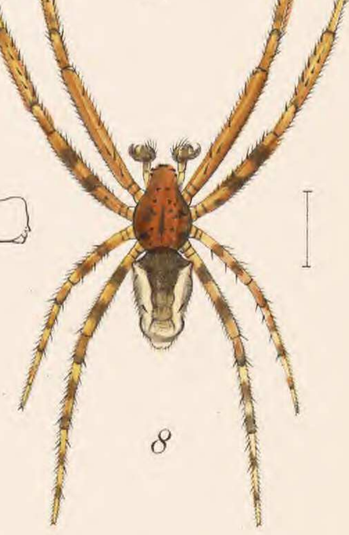
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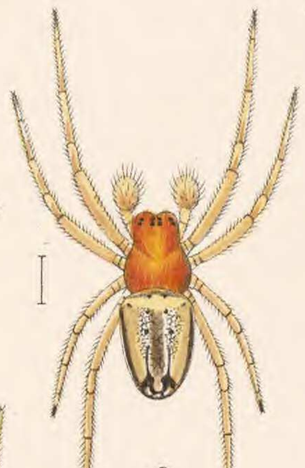
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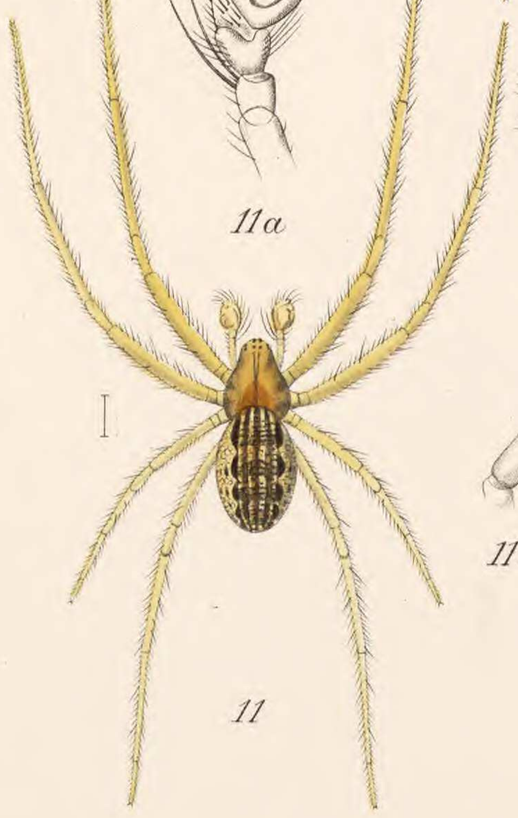
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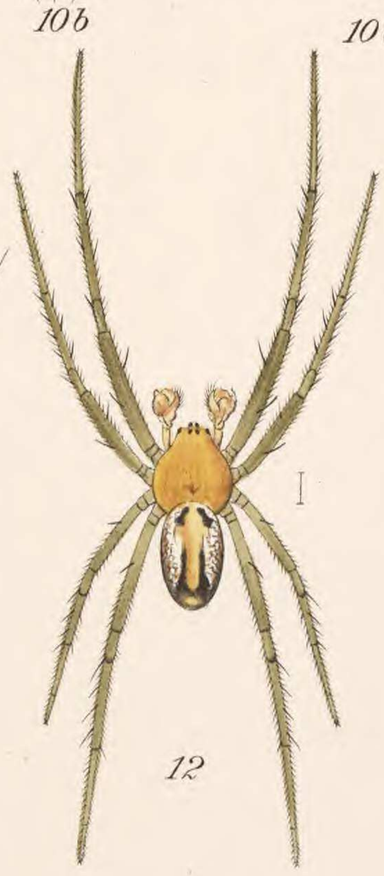
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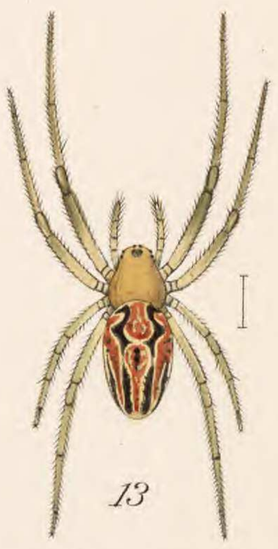
13

1,1a-c,♂ EPEIRA HELVOLA.
2,2a,b,♀ „ „
3,3a-c,♀ „ GREGALIS.
4,4a-c,♀ „ PASSIVA.

5,5a-c,♀ EPEIRA RIGIDA.
6,6a-c,♀ „ HOXÆA.
7,7a-c,♀ „ GRAVABILIS.
8,8a-d,♂ „ HYPOCRITA.
9 ♂. „ SPINIGERA.

10,10a-c,♀ EPEIRA SPINIGERA.
11,11a,b,♂ „ INTERCISA.
12,12a,b,♂ „ CHAMPIONI.
13,13a-c,♀ „ „

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## PLATE VI.

Fig. 1. *Epeira mobilis*, ♀ : 1 *a*, spider in profile, without legs or palpi ; 1 *b*, genital process from in front ; 1 *c*, ditto in profile.

2. *Epeira tauricornis*, ♂ : 2 *a*, spider in profile ; 2 *b* and 2 *c*, palpus in two positions.

3. *Epeira tauricornis*, ♀ : 3 *a*, spider in profile ; 3 *b*, genital process from in front ; 3 *c*, ditto in profile.

4. *Epeira spicata*, ♂ : 4 *a*, spider in profile.

5. *Epeira sargi*, ♀ : 5 *a*, spider in profile ; 5 *b*, genital process from in front ; 5 *c*, ditto in profile.

6. *Cyclosa index*, ♀ : 6 *a*, spider in profile ; 6 *b*, genital process from in front ; 6 *c*, ditto in profile.

7. *Epeira detrimentosa*, ♂ : 7 *a* and 7 *b*, palpus in two positions.

8. *Epeira detrimentosa*, ♀ : 8 *a*, abdomen of var. ; 8 *b*, profile of spider (fig. 8) without legs ; 8 *c*, genital process from in front ; 8 *d*, ditto in profile.

9. *Epeira fecunda*, ♂ : 9 *a*, spider in profile ; 9 *b* and 9 *c*, palpus in two positions.

10. *Epeira fecunda*, ♀ : 10 *a*, genital process from in front.

11. *Epeira expleta*, ♀ : 11 *a*, spider in profile ; 11 *b*, genital process from in front ; 11 *c*, ditto in profile.

12. *Epeira bimaculata*, ♂ : 12 *a*, spider in profile ; 12 *b* and 12 *c*, palpus in two positions.

13. *Epeira bimaculata*, ♀ : 13 *a*, spider in profile ; 13 *b*, genital process from in front ; 13 *c*, ditto in profile.

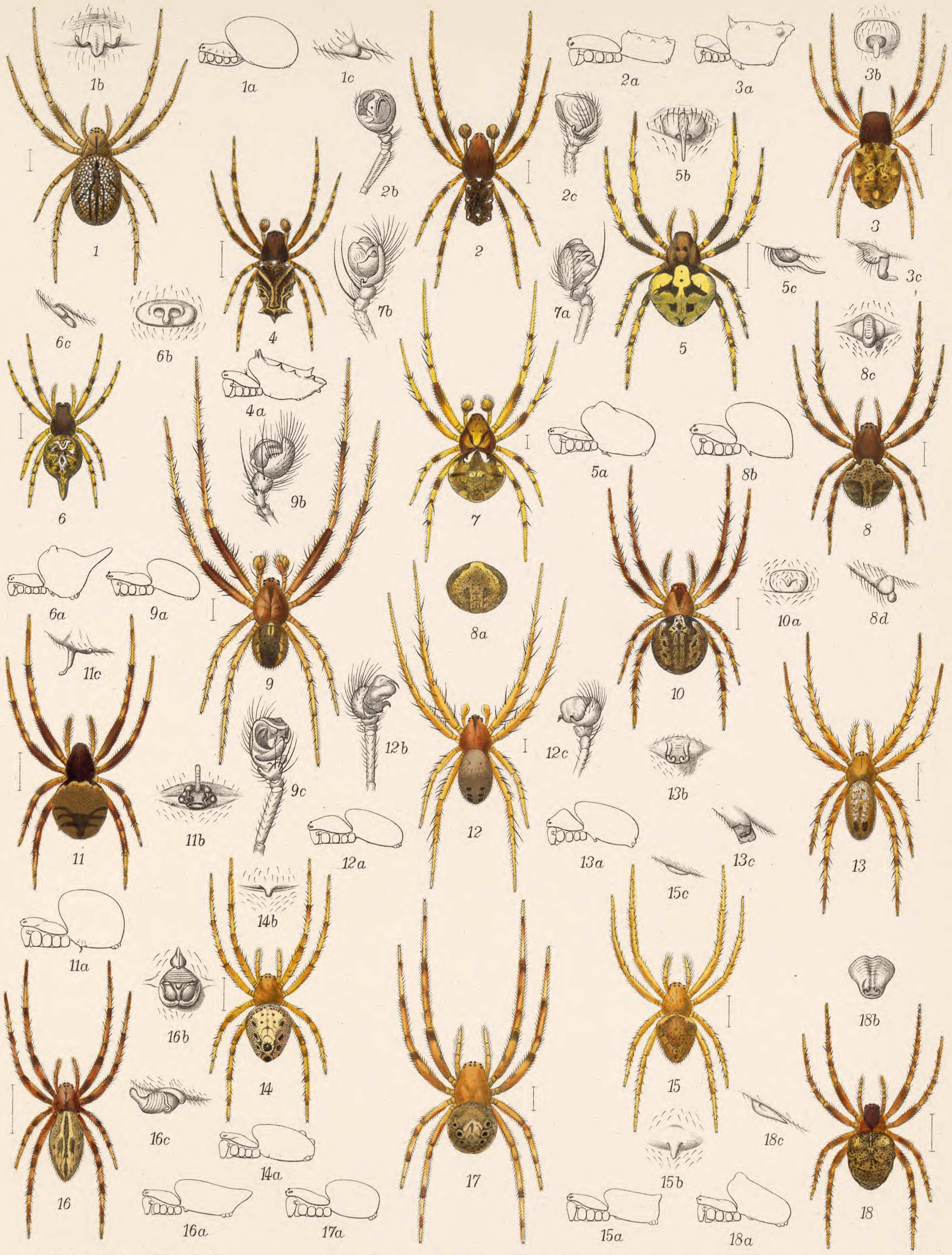
14. *Epeira variolata*, ♀ : 14 *a*, spider in profile ; 14 *b*, genital process from in front.

15. *Epeira bivariolata*, ♀ : 15 *a*, spider in profile ; 15 *b*, genital process from in front ; 15 *c*, ditto in profile.

16. *Epeira illicita*, ♀ : 16 *a*, spider in profile ; 16 *b*, genital process from in front ; 16 *c*, ditto in profile.

17. *Epeira ocellata*, ♀ : 17 *a*, spider in profile.

18. *Epeira rufa*, ♀ : 18 *a*, spider in profile ; 18 *b*, genital process from in front ; 18 *c*, ditto in profile.




1, 1 a-c, ♀ EPEIRA MOBILIS.
2, 2 a-c, ♂ „ TAURICORNIS.
3, 3 a-c, ♀ „ „
4, 4 a, ♂ „ SPICATA.
5, 5 a-c, ♀ „ SARGI.
6, 6 a-c, ♀ CYCLOSA INDEX.

7, 7 a, b, ♂ EPEIRA DETRIMENTOSA.
8, 8 a-d, ♀ „ „
9, 9 a-c, ♂ „ FECUNDA.
10, 10 a, ♀ „ „
11, 11 a-c, ♀ „ EXPLETA.
12, 12 a-c, ♂ „ BIMACULATA.

13, 13 a-c, ♀ EPEIRA BIMACULATA.
14, 14 a, b, ♀ „ VARIOLATA.
15, 15 a-c, ♀ „ BIVARIOLATA.
16, 16 a-c, ♀ „ ILLICITA.
17, 17 a, ♀ „ OCELLATA.
18, 18 a-c, ♀ „ RUFA.

A. T. Hollick. del.

Lith. & Imp. Camb. Sci. Inst. Co.

KODAK Color Control Patches © The Tiffen Company, 2000 Kodak LICENSED PRODUCT Blue Cyan Green Yellow Red Magenta White 3/Color Black Centimetres Inches

## PLATE VII.

Fig. 1. *Epeira nephiloides,* ♀ (var.) : 1 *a,* underside of abdomen.

2. *Epeira nephiloides,* ♀ : 2 *a,* spider in profile ; 2 *b,* genital process from above ; 2 *c,* ditto in profile.

3. *Epeira aculifera,* ♀ : 3 *a,* spider in profile ; 3 *b,* genital process from above ; 3 *c,* ditto in profile.

4. *Epeira purpurascens,* ♂ : 4 *a* and 4 *b,* palpus in two positions.

5. *Epeira purpurascens,* ♀ : 5 *a,* spider in profile ; 5 *b,* underside of abdomen, showing genital process ; 5 *c,* genital process in profile.

6. *Epeira septem-mammata,* ♀ : 6 *a,* spider in profile ; 6 *b,* genital process from above ; 6 *c,* ditto in profile.

7. *Epeira guatemalensis,* ♀ : 7 *a,* spider in profile ; 7 *b,* genital process from above ; 7 *c,* ditto in profile.

8. *Epeira guatemalensis,* ♂ : 8 *a,* spider in profile ; 8 *b* and 8 *c,* palpus in two positions.

9. *Epeira tetragnathoides,* ♂ : 9 *a* and 9 *b,* palpus in two positions.

10. *Epeira tetragnathoides,* ♀ : 10 *a,* spider in profile ; 10 *b,* genital process from in front.

11. *Epeira clavispina,* ♀ : 11 *a,* spider in profile ; 11 *b,* genital process from above ; 11 *c,* ditto in profile ; 11 *d,* portion of a leg, showing the form of spines.

12. *Epeira cylindrica,* ♂ : 12 *a,* spider in profile ; 12 *b* and 12 *c,* palpus in two positions.

13. *Epeira cylindrica,* ♀ : 13 *a,* genital process from above ; 13 *b,* ditto in profile.

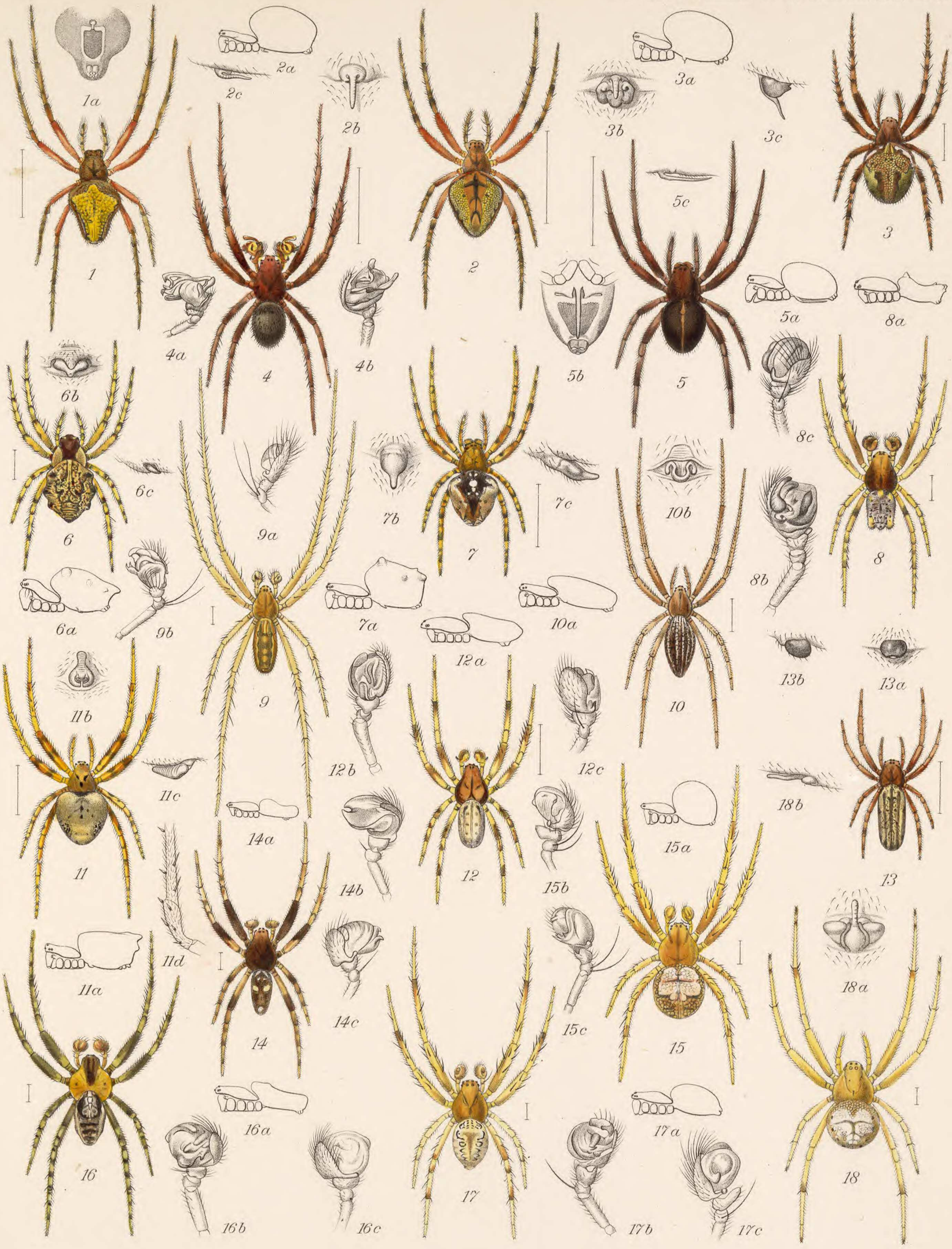
14. *Epeira lacerta,* ♂ : 14 *a,* spider in profile ; 14 *b* and 14 *c,* palpus in two positions.

15. *Epeira solersioides,* ♂ : 15 *a,* spider in profile ; 15 *b* and 15 *c,* palpus in two positions.

16. *Epeira graphica,* ♂ : 16 *a,* spider in profile ; 16 *b* and 16 *c,* palpus in two positions.

17. *Epeira lineatipes,* ♂ : 17 *a,* spider in profile ; 17 *b* and 17 *c,* palpus in two positions.

18. *Epeira lineatipes,* ♀ : 18 *a,* genital process from in front ; 18 *b,* ditto in profile.




| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1, 1 a ♀ | EPEIRA | NEPHILOIDES, *Var.* | 7, 7 a-c ♀ | EPEIRA | GUATEMALENSIS. | 13, 13 a, b ♀ | EPEIRA | CYLINDRICA. |
| 2, 2 a-c ♀ | ,, | ,, | 8, 8 a-c ♂ | ,, | ,, | 14, 14 a-c ♂ | ,, | LACERTA. |
| 3, 3 a-c ♀ | ,, | ACULIFERA. | 9, 9 a, b ♂ | ,, | TETRAGNATHOIDES. | 15, 15 a-c ♂ | ,, | SOLERSIOIDES. |
| 4, 4 a, b ♂ | ,, | PURPURASCENS. | 10, 10 a, b ♀ | ,, | ,, | 16, 16 a-c ♂ | ,, | GRAPHICA. |
| 5, 5 a-c ♀ | ,, | ,, | 11, 11 a-d ♀ | ,, | CLAVISPINA. | 17, 17 a-c ♂ | ,, | LINEATIPES. |
| 6, 6 a-c ♀ | ,, | SEPTEM-MAMMATA. | 12, 12 a-c ♂ | ,, | CYLINDRICA. | 18, 18 a, b ♀ | ,, | ,, |

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## PLATE VIII.

Fig. 1. *Epeira tauricornis*, ♂, var.: 1 *a*, profile without legs.

2. *Epeira tauricornis*, ♀, var.: 2 *a*, profile without legs; 2 *b*, genital process from above and behind; 2 *c*, ditto in profile.

3. *Epeira habilis*, ♀: 3 *a*, abdomen of var.; 3 *b*, spider in profile without legs; 3 *c*, genital process from above and behind; 3 *d*, ditto in profile.

4. *Epeira latebricola*, ♀: 4 *a*, profile without legs; 4 *b*, genital process from above and behind; 4 *c*, ditto in profile.

5. *Epeiroides fasciolata*, ♂: 5 *a*, profile without legs; 5 *b* and 5 *c*, palpus in two positions; 5 *d*, eyes from in front; 5 *e*, maxillæ, labium, and sternum.

6. *Turckheimia walckenaerii*, ♀: 6 *a*, profile without legs; 6 *b*, genital process from above and behind; 6 *c*, ditto in profile.

7. *Cyclosa fissicauda*, ♀: 7 *a*, profile without legs; 7 *b*, genital process from above and behind; 7 *c*, ditto in profile.

8. *Acrosoma calcaratum*, ♂: 8 *a*, profile without legs; 8 *b*, eyes from in front; 8 *c* and 8 *d*, palpus in two positions; 8 *e*, leg of first pair, showing serrations on one side.

9. *Acrosoma longicauda*, ♂: 9 *a*, profile without legs; 9 *b*, eyes from in front; 9 *c* and 9 *d*, palpus in two positions.

10. *Acrosoma brevipes*, ♂: 10 *a*, profile without legs; 10 *b*, eyes from in front; 10 *c* and 10 *d*, palpus in two positions.

11. *Acrosoma furcula*, ♀: 11 *a*, profile without legs; 11 *b*, genital process from above and behind; 11 *c*, ditto in profile; 11 *d*, eyes from in front.

12. *Acrosoma* 12-*spinosum*, ♀: 12 *a*, profile without legs; 12 *b*, posterior extremity of abdomen, enlarged; 12 *c*, eyes from in front; 12 *d*, genital process from above and behind; 12 *e*, ditto in profile.

13. *Acrosoma fericulum*, ♀: 13 *a*, profile without legs; 13 *b*, eyes from in front; 13 *c*, genital process from above and behind; 13 *d*, ditto in profile.

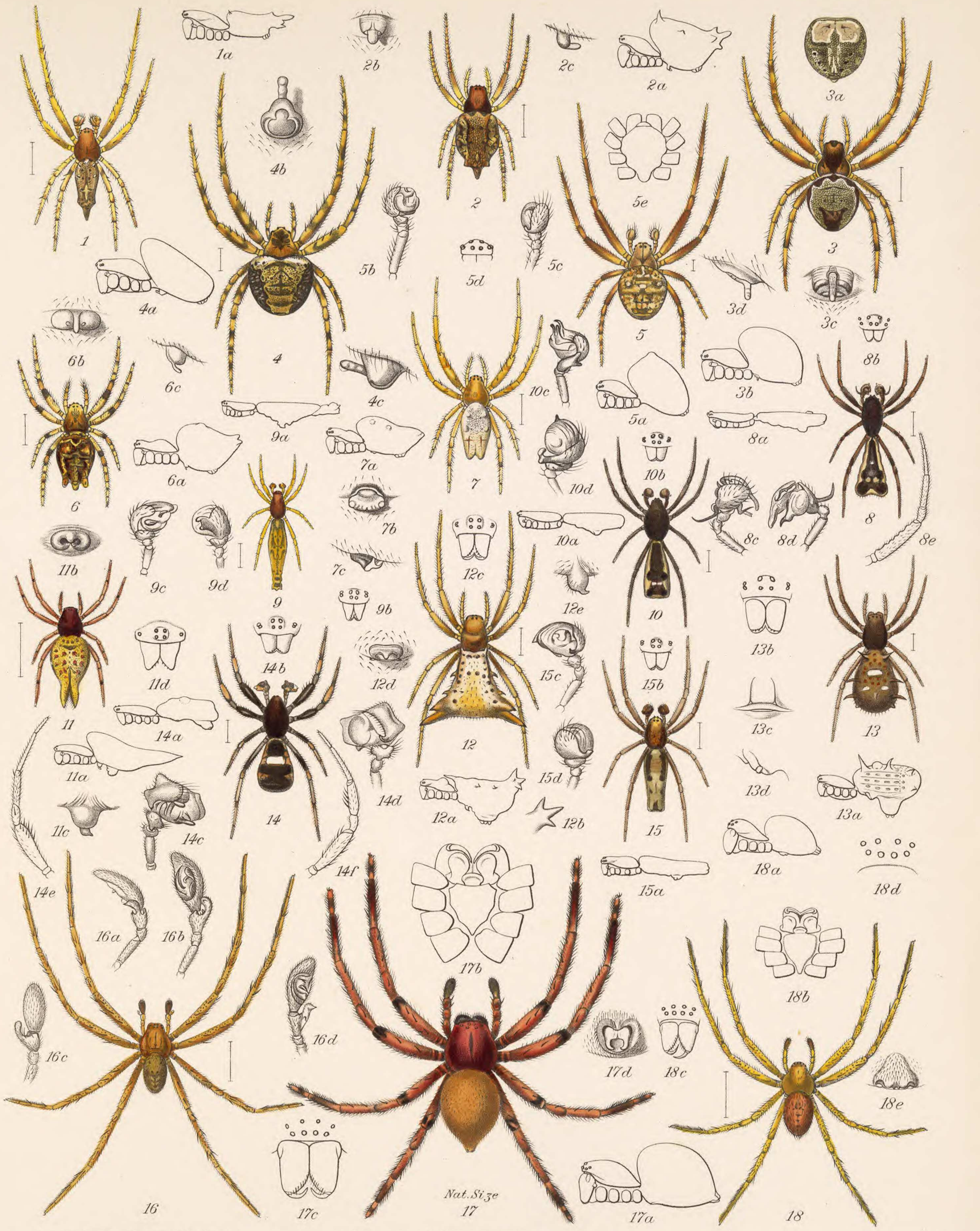
14. *Acrosoma vitiosum*, ♂: 14 *a*, profile without legs; 14 *b*, eyes from in front; 14 *c* and 14 *d*, palpus in two positions; 14 *e*, leg of first pair, enlarged, showing spines on femur; 14 *f*, leg of second pair, enlarged, showing tumid tibia and spines.

15. *Acrosoma parallelum*, ♂: 15 *a*, profile without legs; 15 *b*, eyes from in front; 15 *c* and 15 *d*, palpus in two positions.

16. *Olios manifestus*, ♂: 16 *a*, 16 *b*, 16 *c*, and 16 *d*, palpus in various positions.

17. *Sadala simonii*, ♀: 17 *a*, profile without legs; 17 *b*, underside of cephalothorax, showing maxillæ, labium, sternum, and falces; 17 *c*, eyes and falces from in front; 17 *d*, genital aperture from above and behind.

18. *Olios manifestus*, ♀: 18 *a*, profile without legs; 18 *b*, underside of cephalothorax, showing maxillæ, labium, sternum, and falces; 18 *c*, eyes and falces from in front; 18 *d*, eyes from in front, in slightly different position and more enlarged; 18 *e*, genital aperture from above and behind.




1, 1a ♂ EPEIRA TAURICORNIS, *Var.*
2, 2a-c ♀ „ „ „
3, 3a-d ♀ „ HABILIS.
4, 4a-c ♀ „ LATEBRICOLA.
5, 5a-e ♂ EPEIROIDES FASCIOLATA.
6, 6a-c ♀ TURCKHEIMIA WALCKENAERII.

7, 7a-c ♀ CYCLOSA FISSICAUDA.
8, 8a-e ♂ ACROSOMA CALCARATUM.
9, 9a-d ♂ „ LONGICAUDA.
10, 10a-d ♂ „ BREVIPES.
11, 11a-d ♀ „ FURCULA.
12, 12a-e ♀ „ 12-SPINOSUM.

13, 13a-d ♀ ACROSOMA FERICULUM.
14, 14a-f ♂ „ VITIOSUM.
15, 15a-d ♂ „ PARALLELUM.
16, 16a-d ♂ OLIOS MANIFESTUS.
17, 17a-d ♀ SADALA SIMONII.
18, 18a-e ♀ OLIOS MANIFESTUS.

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# ARACHNIDA.—ARANEIDEA.

## PLATE IX.

Fig. 1. *Olios erroneus*, ♀ : 1 *a*, spider in profile; 1 *b*, eyes and falces from in front; 1 *c*, maxillæ, labium, and sternum; 1 *d*, eyes from in front, looking a little more downwards; 1 *e*, genital aperture.

2. *Olios exasperans*, ♀ : 2 *a*, genital aperture; 2 *b*, eyes and portion of falces from in front.

3. *Olios sagus*, ♀ : 3 *a*, maxillæ, labium, and sternum; 3 *b*, eyes and portion of falces from in front; 3 *c*, genital aperture.

4. *Runcinia vigilans*, ♂ : 4 *a*, 4 *b*, palpus in two positions.

5. *Runcinia vigilans*, ♀ : 5 *a*, spider in profile; 5 *b*, eyes from in front; 5 *c*, genital aperture.

6. *Runcinia signata*, ♀ : 6 *a*, spider in profile; 6 *b*, maxillæ, labium, and sternum; 6 *c*, eyes and portion of falces from in front; 6 *d*, genital aperture.

7. *Synæma bimaculata*, ♀ : 7 *a*, spider in profile; 7 *b*, abdomen of a variety; 7 *c*, eyes and portion of falces from in front; 7 *d*, genital aperture.

8. *Synæma bimaculata*, ♂ : 8 *a*, 8 *b*, palpus in two positions.

9. *Vindullus similis*, ♀ : 9 *a*, spider in profile; 9 *b*, eyes and portion of falces from in front; 9 *c*, maxillæ, labium, and sternum; 9 *d*, genital aperture.

10. *Sadala fugiens*, ♂ : 10 *a*, eyes and portion of falces from in front; 10 *b*, tarsus and metatarsus of an anterior leg; 10 *c*, 10 *d*, palpus in two positions.

11. *Xysticus adustus*, ♀ : 11 *a*, genital aperture.

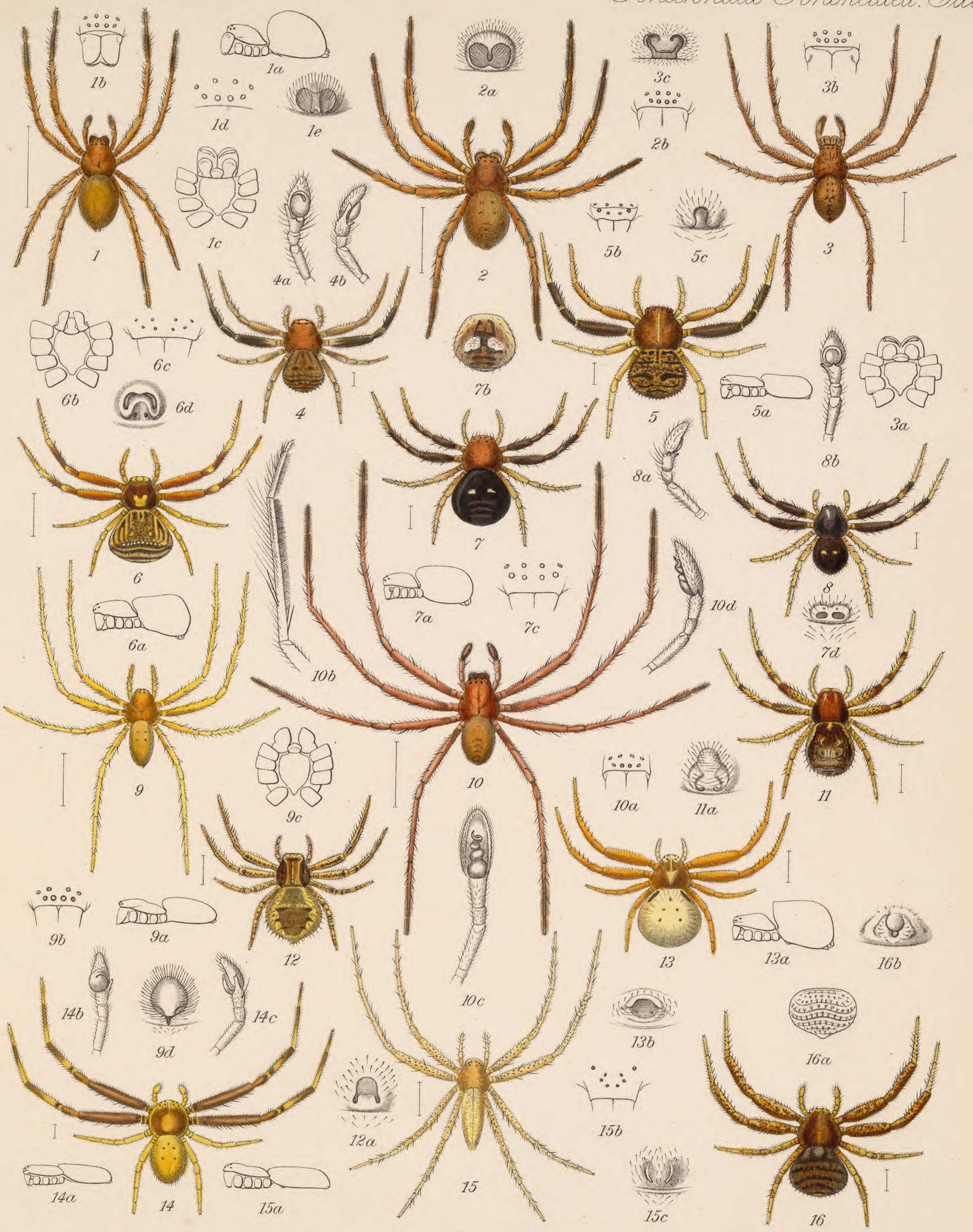
12. *Xysticus advectus*, ♀ : 12 *a*, genital aperture.

13. *Runcinia lutea*, ♀ : 13 *a*, spider in profile; 13 *b*, genital aperture.

14. *Runcinia annulipes*, ♂ : 14 *a*, spider in profile; 14 *b*, 14 *c*, palpus in two positions.

15. *Tibellus punctipes*, ♀ : 15 *a*, spider in profile; 15 *b*, eyes and portion of falces from in front; 15 *c*, genital aperture.

16. *Runcinia rugosa*, ♀ : 16 *a*, abdomen from behind; 16 *b*, genital aperture.



1, 1 a-e, ♀ OLIOS ERRONEUS.
2, 2 a, b, ♀ „ EXASPERANS.
3, 3 a-c, ♀ „ SAGUS.
4, 4 a, b, ♂ RUNCINIA VIGILANS.
5, 5 a-c, ♀ „ „
6, 6 a-d, ♀ RUNCINIA SIGNATA.
7, 7 a-d, ♀ SYNÆMA BIMACULATA.
8, 8 a, b, ♂ „ „
9, 9 a-d, ♀ VINDULLUS SIMILIS.
10, 10 a-d, ♂ SADALA FUGIENS.
11, 11 a, ♀ XYSTICUS ADUSTUS.
12, 12 a, ♀ XYSTICUS ADVECTUS.
13, 13 a, b, ♀ RUNCINIA LUTEA.
14, 14 a-c, ♂ „ ANNULIPES.
15, 15 a-c, ♀ TIBELLUS PUNCTIPES.
16, 16 a, b, ♀ RUNCINIA RUGOSA.

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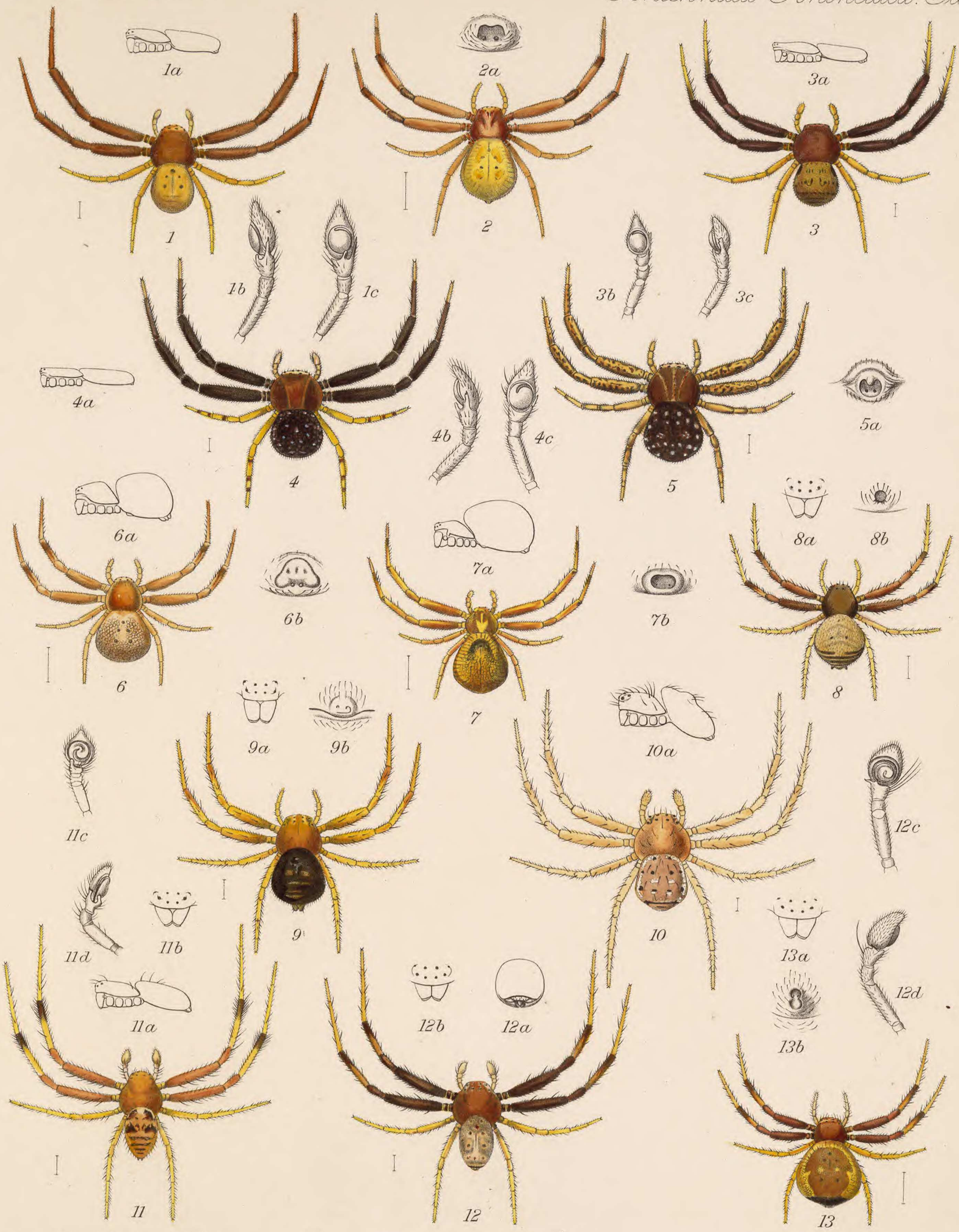
## PLATE X.

Fig. 1. *Runcinia blanda*, ♂: 1 *a*, profile without legs or palpi; 1 *b*, 1 *c*, palpus in two positions.
2. *Runcinia blanda*, ♀: 2 *a*, genital aperture.
3. *Runcinia tibialis*, ♂: 3 *a*, profile without legs or palpi; 3 *b*, 3 *c*, palpus in two positions.
4. *Runcinia depressa*, ♂: 4 *a*, profile without legs or palpi; 4 *b*, 4 *c*, palpus in two positions.
5. *Runcinia depressa*, ♀: 5 *a*, genital aperture.
6. *Runcinia propinqua*, ♀: 6 *a*, profile without legs or palpi; 6 *b*, genital aperture.
7. *Runcinia sagittata*, ♀: 7 *a*, profile without legs or palpi; 7 *b*, genital aperture.
8. *Synæma palliata*, ♀: 8 *a*, eyes and falces from in front; 8 *b*, genital aperture.
9. *Synæma puta*, ♀: 9 *a*, eyes and falces from in front; 9 *b*, genital aperture.
10. *Synæma maculosa*, ♂ (immature): 10 *a*, profile without legs or palpi.
11. *Synæma cirripes*, ♂: 11 *a*, profile without legs; 11 *b*, eyes and falces from in front; 11 *c*, 11 *d*, palpus in two positions.
12. *Synæma affinitata*, ♂: 12 *a*, outline of abdomen from behind, showing its carapace-like cuticle; 12 *b*, eyes and falces from in front; 12 *c*, 12 *d*, palpus in two positions.
13. *Synæma affinitata*, ♀: 13 *a*, eyes and falces from in front; 13 *b*, genital aperture.




1, 1a-c ♂ RUNCINIA BLANDA.
2, 2a ♀ „ „
3, 3a-c ♂ „ TIBIALIS.
4, 4a-c ♂ „ DEPRESSA.

5, 5a ♀ RUNCINIA DEPRESSA.
6, 6a, b ♀ „ PROPINQUA.
7, 7a, b ♀ „ SAGITTATA.
8, 8a, b ♀ SYNÆMA PALLIATA.
9, 9a, b ♀ „ PUTA.

10, 10a ♂ SYNÆMA MACULOSA.
11, 11a-d ♂ „ CIRRIPES.
12, 12a-d ♂ „ AFFINITATA.
13, 13a, b ♀ „ „

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## PLATE XI.

Fig. 1. *Synæma adjuncta*, ♀: 1 *a*, eyes and falces from in front; 1 *b*, genital aperture.

2. *Synæma maculosa*, ♂: 2 *a*, profile without legs; 2 *b*, eyes and falces from in front; 2 *c*, outline of abdomen from behind; 2 *d*, 2 *e*, palpus in two positions.—N.B. In the specimen from which this figure was drawn the legs of the second pair were broken off, the outlines are therefore only conjectural.

3. *Synæma profuga*, ♀: 3 *a*, eyes and falces from in front; 3 *b*, genital aperture.

4. *Synæma socia*, ♂: 4 *a*, profile without legs; 4 *b*, eyes and falces from in front; 4 *c*, 4 *d*, palpus in two positions.

5. *Diæa puta*, ♀: 5 *a*, profile without legs; 5 *b*, eyes and falces from in front; 5 *c*, genital aperture.

6. *Misumena pascalis*, ♀: 6 *a*, profile without legs; 6 *b*, eyes and falces from in front; 6 *c*, genital aperture.

7. *Misumena conjuncta*, ♀: 7 *a*, profile without legs; 7 *b*, eyes and falces from in front; 7 *c*, genital aperture.

8. *Eurypelma mesomelas*, ♂ (natural size): 8 *a*, profile without legs (reduced); 8 *b*, eyes from in front; 8 *c*, 8 *d*, palpus in two positions.

9. *Strophius hirsutus*, ♀: 9 *a*, profile without legs; 9 *b*, eyes and falces from in front; 9 *c*, genital aperture.

10. *Misumena pallida*, ♀: 10 *a*, profile without legs; 10 *b*, eyes and falces from in front; 10 *c*, genital aperture.

11. *Bucranium spinigerum*, ♀: 11 *a*, profile without legs; 11 *b*, eyes and falces from in front; 11 *c*, underside of cephalothorax with legs and palpi truncated; 11 *d*, genital aperture.

12. *Thanatus punctiger*, ♀: 12 *a*, profile without legs; 12 *b*, eyes and falces from in front; 12 *c*, genital aperture.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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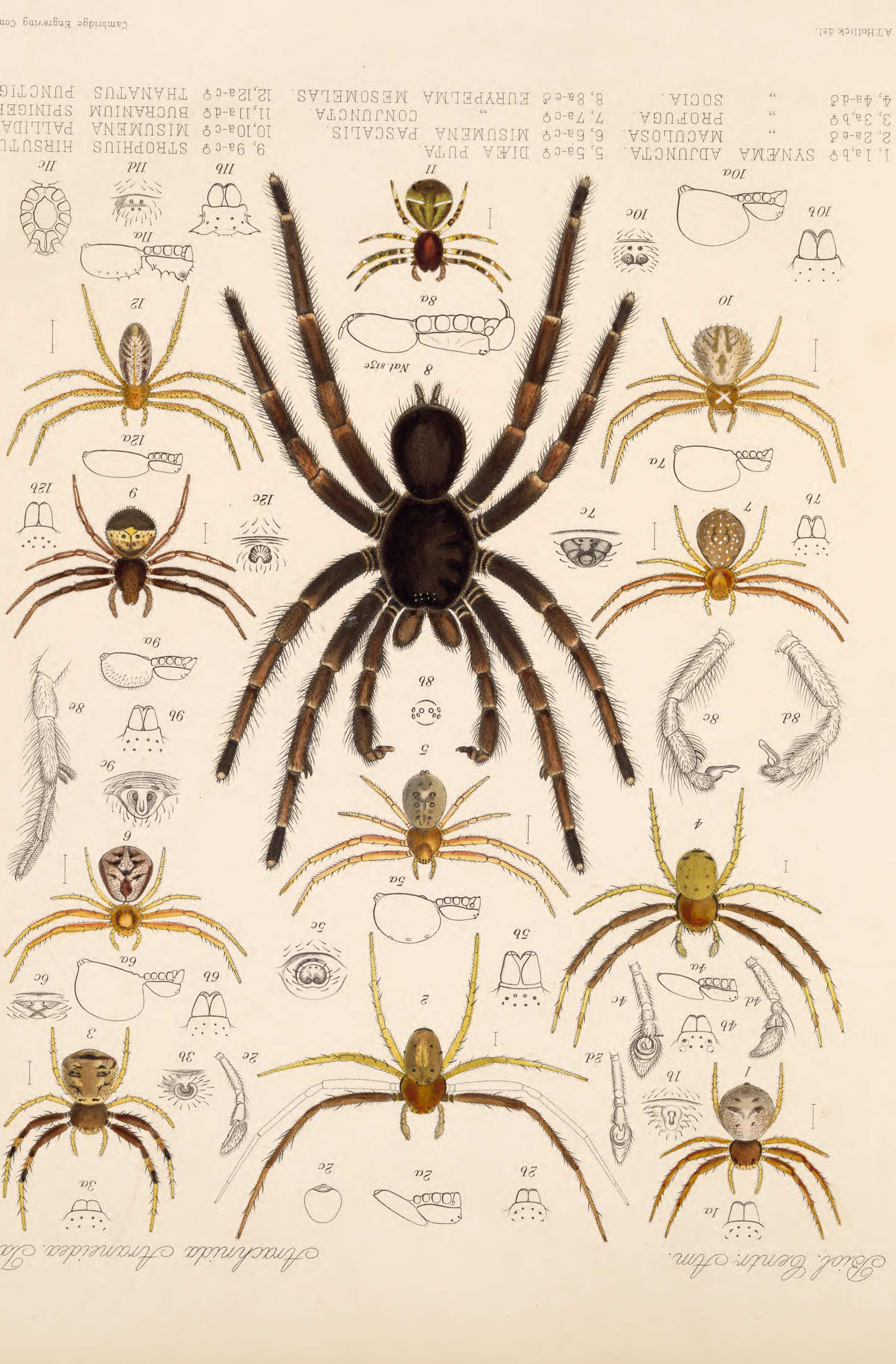
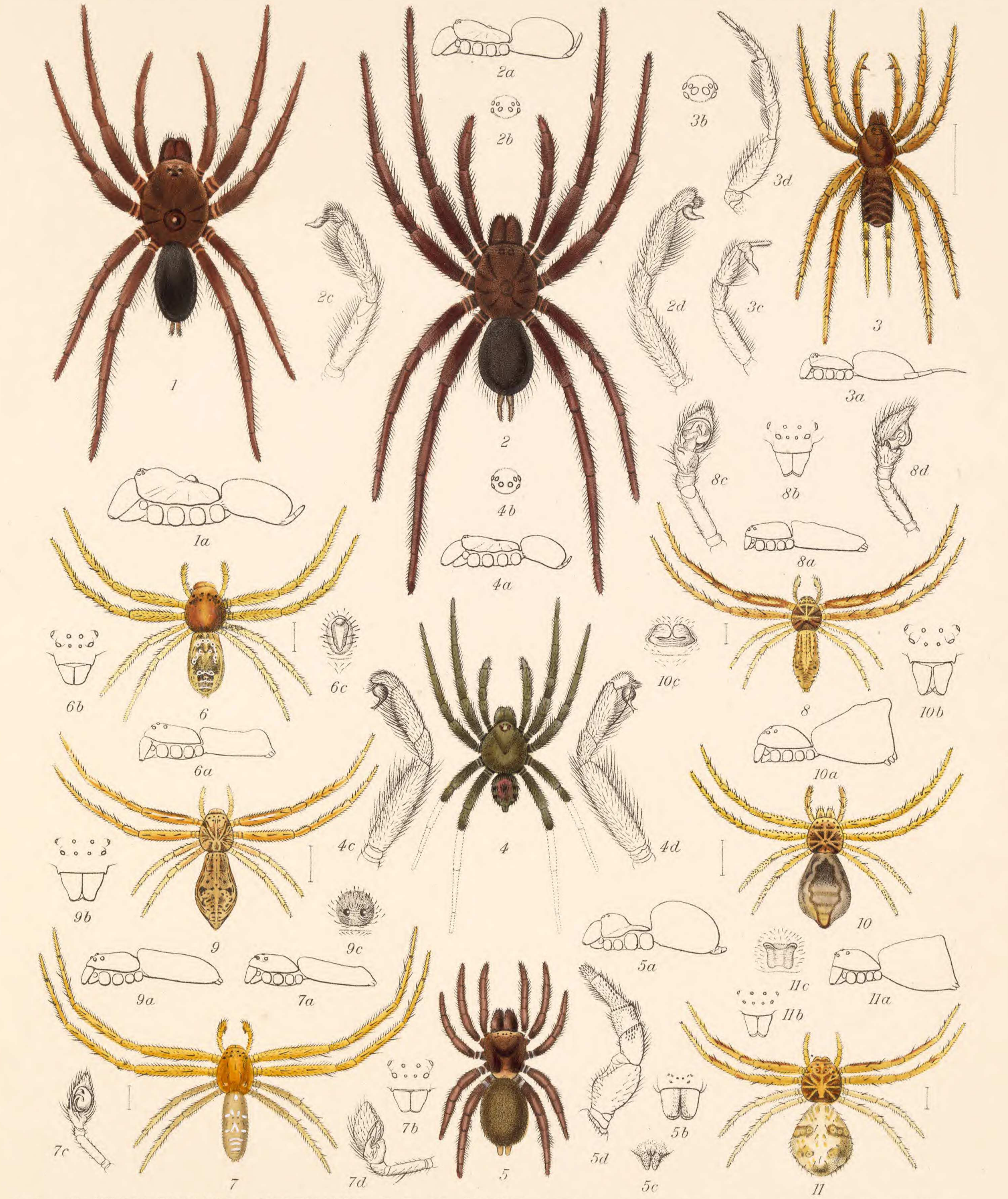



1, 1a,b ♀ SYNEMA ADJUNCTA. 5, 5a-c ♀ DIEA PUTA.
2, 2a-e ♂ „ MACULOSA. 6, 6a-c ♀ MISUMENA PASCALIS.
3, 3a,b ♀ „ PROFUGA. 7, 7a-c ♀ „ CONJUNCTA.
4, 4a-d ♂ „ SOCIA. 8, 8a-e ♂ EURYPELMA MESOMELAS.
9, 9a-c ♀ STROPHIUS HIRSUTUS.
10, 10a-c ♀ MISUMENA PALLIDA.
11, 11a-d ♀ BUCRANIUM SPINIGERUM.
12, 12a-c ♀ THANATUS PUNCTIGER.

## PLATE XII.

Fig. 1. *Sphærobothria hoffmanni,* ♀ (natural size) : 1 *a,* profile without legs.
2. *Sphærobothria hoffmanni,* ♂ (natural size) : 2 *a,* profile without legs ; 2 *b,* eyes from in front ; 2 *c* and 2 *d,* palpus in two positions.
3. *Macrothele digitata,* ♂ : 3 *a,* profile without legs ; 3 *b,* eyes from in front ; 3 *c* and 3 *d,* palpus in two positions.
4. *Pella fasciata,* ♂ (natural size) : 4 *a,* profile without legs ; 4 *b,* eyes from in front ; 4 *c* and 4 *d,* palpus in two positions.
5. *Pachyloscelis robustus,* ♀ (natural size) : 5 *a,* profile without legs ; 5 *b,* eyes and falces from in front ; 5 *c,* spinners ; 5 *d,* leg of third pair.
6. *Tmarus studiosus,* ♀ : 6 *a,* profile without legs ; 6 *b,* eyes and falces from in front ; 6 *c,* genital aperture.
7. *Tmarus studiosus,* ♂ : 7 *a,* profile without legs ; 7 *b,* eyes and falces from in front ; 7 *c* and 7 *d,* palpus in two positions.
8. *Tmarus pauper,* ♂ : 8 *a,* profile without legs ; 8 *b,* eyes and falces from in front ; 8 *c* and 8 *d,* palpus in two positions.
9. *Tmarus decens,* ♀ : 9 *a,* profile without legs ; 9 *b,* eyes and falces from in front ; 9 *c,* genital aperture.
10. *Tmarus corruptus,* ♀ : 10 *a,* profile without legs ; 10 *b,* eyes and falces from in front ; 10 *c,* genital aperture.
11. *Tmarus mundulus,* ♀ : 11 *a,* profile without legs ; 11 *b,* eyes and falces from in front ; 11 *c,* genital aperture.




1, 1a ♀ SPHÆROBOTHRIA HOFFMANNI.
2, 2a-d ♂ ,, ,,
3, 3a-d ♂ MACROTHELE DIGITATA.
4, 4a-d ♂ PELLA FASCIATA.
5, 5a-d ♀ PACHYLOSCELIS ROBUSTUS.
6, 6a-c ♀ TMARUS STUDIOSUS.
7, 7a-d ♂ ,, ,, .
8, 8a-d ♂ TMARUS PAUPER.
9, 9a-c ♀ ,, DECENS.
10, 10a-c ♀ ,, CORRUPTUS.
11, 11a-c ♀ ,, MUNDULUS.

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## PLATE XIII.

Fig. 1. *Tmarus intentus*, ♂: 1 *a*, profile; 1 *b*, eyes and falces from in front; 1 *c* and 1 *d*, palpus in two positions.

2. *Tmarus intentus*, ♀: 2 *a*, profile; 2 *b*, eyes and falces from in front; 2 *c*, genital aperture.

3. *Tmarus ineptus*, ♀: 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, genital aperture.

4. *Satricum gnaphosoides*, ♂: 4 *a*, profile; 4 *b*, underside of cephalothorax showing maxillæ, labium, and sternum; 4 *c*, eyes and falces from in front; 4 *d* and 4 *e*, palpus in two positions.

5. *Satricum gnaphosoides*, ♀: 5 *a*, genital aperture.

6. *Ctenus mordicus*, ♀: 6 *a*, underside of abdomen.

7. *Ctenus mordicus*, ♂: 7 *a*, profile; 7 *b*, underside of cephalothorax showing maxillæ, labium, and sternum; 7 *c*, eyes and falces from in front; 7 *d* and 7 *e*, palpus in two positions.

8. *Ramnes semotus*, ♀: 8 *a*, profile; 8 *b*, underside of cephalothorax showing maxillæ, labium, and sternum; 8 *c*, eyes and falces from in front; 8 *d*, leg of first pair.

9. *Prusias nugalis*, ♂ (immature): 9 *a*, profile; 9 *b*, underside of cephalothorax showing maxillæ, labium, and sternum; 9 *c*, eyes and falces from in front; 9 *d*, leg of first pair.

10. *Arachosia puta*, ♀: 10 *a*, profile; 10 *b*, eyes and falces from in front; 10 *c*, genital aperture.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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1, 1a-d♂ TMARUS INTENTUS.
2, 2a-c♀ „ „
3, 3a-c♀ „ INEPTUS.

4, 4a-e♂ SATRICUM GNAPHOSOIDES.
5, 5a ♀ „ „
6, 6a ♀ CTENUS MORDICUS.
7, 7a-e♂ „ „

8, 8a-d♀ RAMNES SEMOTUS.
9, 9a-d♂ PRUSIAS NUGALIS.
10,10a-c♀ ARACHOSIA PUTA.

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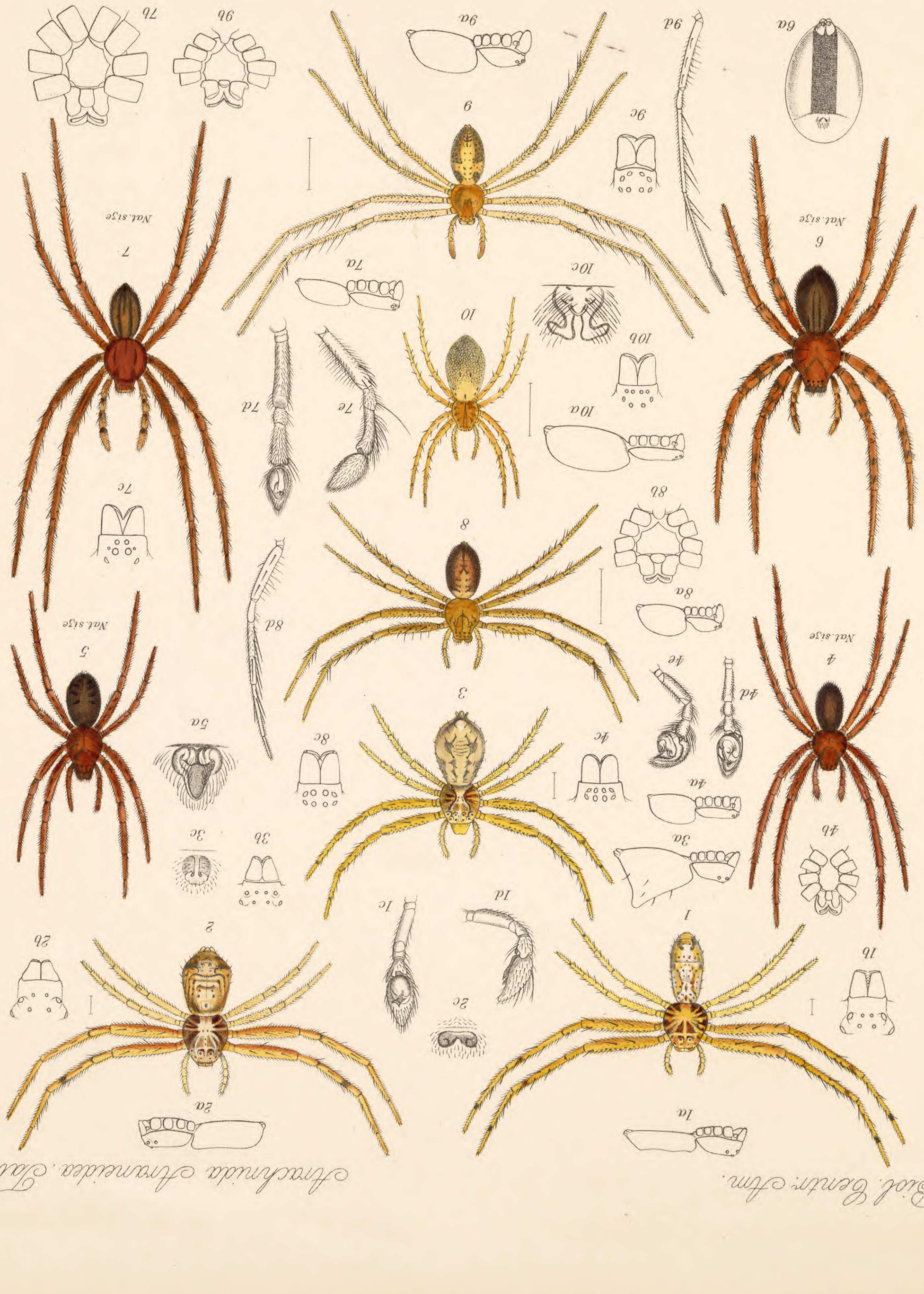


Stark Bentr: chm.

Arachnida Araneidea. Tab: 13.

# PLATE XIV.

Fig. 1. *Misumena particeps*, ♀: 1 *a*, profile; 1 *b*, eyes and falces from in front; 1 *c*, genital aperture.

2. *Stephanopoides cognata*, ♀: 2 *a*, profile; 2 *b*, eyes and falces from in front; 2 *c*, genital aperture.

3. *Strophius signatus*, ♂: 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, 3 *d*, palpus in two positions.

4. *Perissoblemma approximatum*, ♀: 4 *a*, profile; 4 *b*, eyes and falces from in front.

5. *Delozeugma formidabile*, ♂: 5 *a*, profile; 5 *b*, eyes from behind; 5 *c*, eyes from in front; 5 *d*, 5 *e*, palpus in two positions; 5 *f*, maxillæ, labium, and sternum; 5 *g*, falx in profile; 5 *h*, falx from beneath showing the direction of fang.

6. *Hersilia mexicana* *, ♂: 6 *a*, profile; 6 *b*, eyes and falces from in front; 6 *c*, palpus.

7. *Hersilia mexicana* *, ♀: 7 *a*, genital aperture.

8. *Macrophyes attenuata*, ♂: 8 *a*, profile; 8 *b*, maxillæ, labium, and sternum; 8 *c*, 8 *d*, palpus in two positions.

9. *Kaira dromedaria*, ♀: 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c*, genital process in profile; 9 *d*, ditto from in front.

10. *Paphlagon beatus*, ♀: 10 *a*, profile; 10 *b*, eyes and falces from in front; 10 *c*, eyes from behind; 10 *d*, maxillæ, labium, and sternum; 10 *e*, genital aperture.

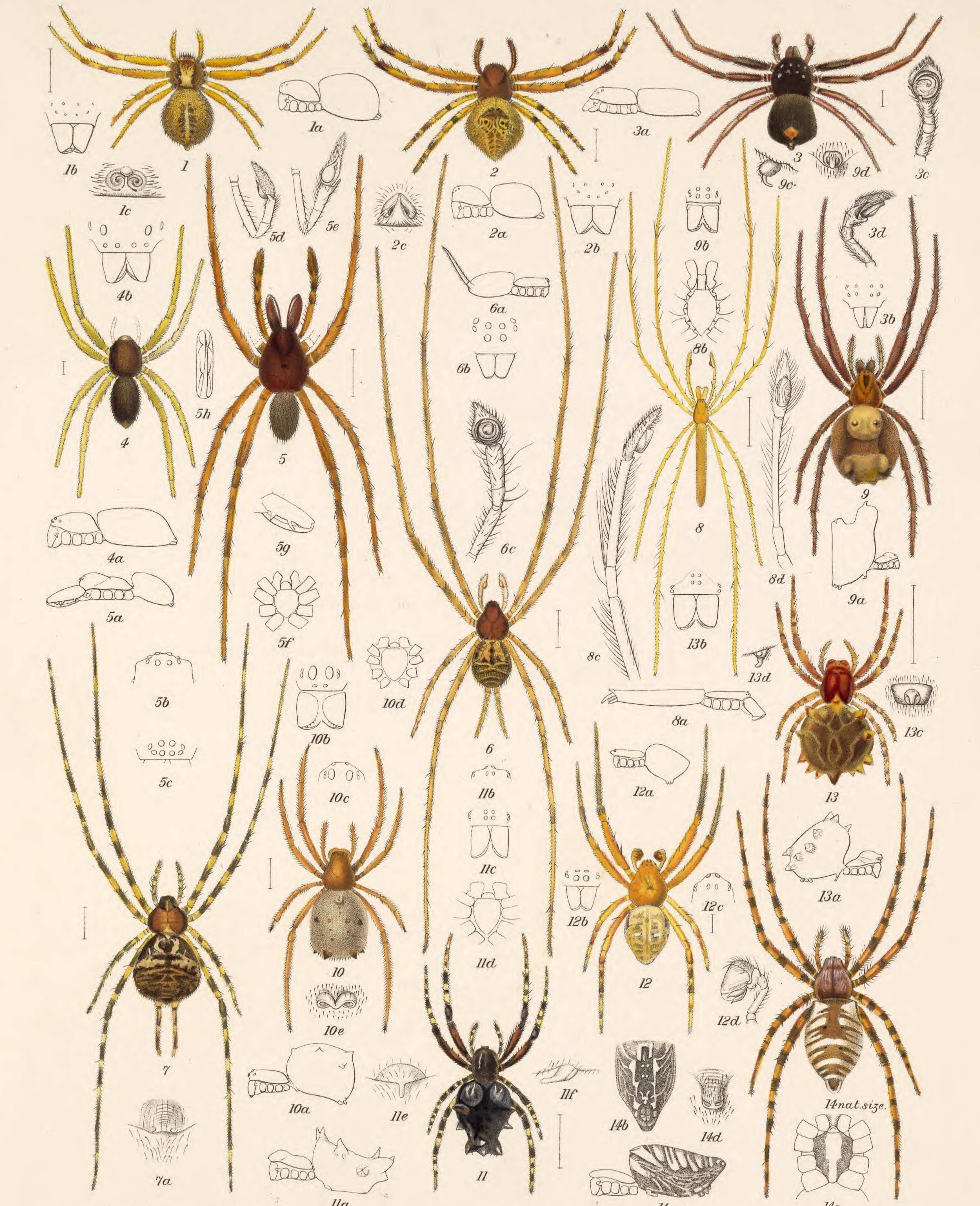
11. *Turckheimia armata*, ♀: 11 *a*, profile; 11 *b*, eyes from behind; 11 *c*, eyes and falces from in front; 11 *d*, maxillæ, labium, and sternum; 11 *e*, genital process from in front; 11 *f*, ditto in profile.

12. *Cyclosa culta*, ♂: 12 *a*, profile; 12 *b*, eyes and falces from in front; 12 *c*, eyes from behind; 12 *d*, palpus.

13. *Cyrtarachne mexicana*, ♀: 13 *a*, profile; 13 *b*, eyes and falces from in front; 13 *c*, genital process from in front; 13 *d*, ditto in profile.

14. *Argiope personata*, ♀: 14 *a*, profile; 14 *b*, underside of abdomen; 14 *c*, maxillæ, labium, and sternum; 14 *d*, genital process from in front.

* The legs in these should be extended more laterally: owing to exigencies of space a longitudinal direction had to be adopted.




1, 1a-c ♀ MISUMENA PARTICEPS.
2, 2a-c ♀ STEPHANOPOIDES COGNATA.
3, 3a-d ♂ STROPHIUS SIGNATUS.
4, 4a, b ♀ PERISSOBLEMMA APPROXIMATUM.
5, 5a-h ♂ DELOZEUGMA FORMIDABILE.
6, 6a-c ♂ HERSILIA MEXICANA.
7, 7a, ♀ " "
8, 8a-d ♂ MACROPHYES ATTENUATA.
9, 9a-d ♀ KAIRA DROMEDARIA.
10, 10a-e ♀ PAPHLAGON BEATUS.
11, 11a-f ♀ TURCKHEIMIA ARMATA.
12, 12a-d ♂ CYCLOSA CULTA.
13, 13a-d ♀ CYRTARACHNE MEXICANA.
14, 14a-d ♀ ARGIOPE PERSONATA.

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## PLATE XV.

Fig. 1. *Epeira minax*, ♀ : 1 *a*, eyes and falces from in front; 1 *b*, epigyne from in front; 1 *c*, ditto in profile; 1 *d*, abdomen of a variety.

2. *Episinus cognatus*, ♂ : 2 *a*, profile; 2 *b*, maxillæ, labium, and sternum; 2 *c*, outline of abdomen; 2 *d*, 2 *e*, palpus in two positions.

3. *Epeira nigrohumeralis*, ♀ : 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, epigyne from in front; 3 *d*, ditto in profile.

4. *Azilia affinis*, ♀ : 4 *a*, profile; 4 *b*, genital aperture; 4 *c*, underside of abdomen.

5. *Epeira nigropustulata*, ♂ : 5 *a*, profile; 5 *b*, eyes from in front.

6. *Euryopis lineatipes*, ♀ : 6 *a*, profile; 6 *b*, leg enlarged, showing transverse linear markings; 6 *c*, genital aperture; 6 *d*, underside of abdomen.

7. *Miagrammopes mexicanus*, ♀ : 7 *a*, profile; 7 *b*, underside of cephalothorax; 7 *c*, upperside of caput and eyes; 7 *d*, genital aperture.

8. *Coccorchestes scarabæoides*, ♂ : 8 *a*, profile; 8 *b*, eyes * from in front; 8 *c*, upperside of caput and eyes *; 8 *d*, maxillæ, labium, and sternum; 8 *e*, 8 *f*, palpus in two positions; 8 *g*, genital aperture of ♀.

9. *Synæma interrupta*, ♂ : 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c*, 9 *d*, palpus in two positions.

10. *Synæma interrupta*, ♀ : 10 *a*, genital aperture.

11. *Misumena ornata*, ♀ : 11 *a*, profile; 11 *b*, eyes from in front; 11 *c*, genital aperture.

12. *Eripus trifidus*, ♀ : 12 *a*, profile; 12 *b*, outline of abdomen from in front; 12 *c*, eyes and falces from in front; 12 *d*, eyes from above; 12 *e*, maxillæ, labium, and sternum; 12 *f*, leg enlarged; 12 *g*, genital aperture.

13. *Misumena ornata*, ♀ : variety.

14. *Philodromus maculatipes*, ♂ : 14 *a*, profile of cephalothorax; 14 *b*, eyes from in front; 14 *c*, maxillæ, labium, and sternum; 14 *d*, 14 *e*, palpus in two positions.

15. *Synæma culta*, ♀ : 15 *a*, profile; 15 *b*, eyes and falces from in front; 15 *c*, genital aperture.

* The minute eye on each side of the intermediate row, in figures 8 *b* and 8 *c* of *Coccorchestes scarabæoides*, is accidentally omitted.

Inches 1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Centimetres
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1,1a-d,♀ EPEIRA MINAX.
2,2a-e,♂ EPISINUS COGNATUS.
3,3a-d,♀ EPEIRA NIGROHUMERALIS.
4,4a-c,♀ AZILIA AFFINIS.
5,5a,b,♂ EPEIRA NIGROPUSTULATA.
6,6a-d,♀ EURYOPIS LINEATIPES.
7,7a-d,♀ MAGRAMMOPES MEXICANUS.
8,8a-g,♂ COCCORCHESTES SCARABÆOIDES.
9,9a-d,♂ SYNÆMA INTERRUPTA.
10,10a,♀ " "
11,11a-c,♀ MISUMENA ORNATA.
12,12a-g,♀ ERIPUS TRIFIDUS
13, ♀ MISUMENA ORNATA, *var.*
14,14a-e,♂ PHILODROMUS MACULATIPES.
15,15a-c,♀ SYNÆMA CULTA.

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*Black Bentr. etm.* *Arachnida Araneidea. Tab. 15.*

## PLATE XVI.

Fig. 1. *Erigone dentosa*, ♂ : 1 *a*, profile ; 1 *b*, caput and falces from in front ; 1 *c* and 1 *d*, palpus in two positions.

2. *Euryopis lineatipes*, ♂ : 2 *a* and 2 *b*, palpus in two positions.

3. *Argyroepeira mesomelas*, ♀ : 3 *a*, profile ; 3 *b*, eyes from in front ; 3 *c*, genital aperture.

4. *Argyrodes argenteola*, ♂ : 4 *a*, profile ; 4 *b*, eyes from in front ; 4 *c* and 4 *d*, palpus in two positions.

5. *Oxyopeidon subfacile*, ♀ : 5 *a*, profile ; 5 *b*, caput and falces from in front ; 5 *c*, genital aperture.

6. *Oxyopeidon facile*, ♀ : 6 *a*, profile ; 6 *b*, caput and falces from in front ; 6 *c*, genital aperture.

7. *Oxyopeidon putum*, ♂ : 7 *a*, profile ; 7 *b*, caput and falces from in front ; 7 *c*, underside of cephalothorax showing maxillæ, labium, and sternum ; 7 *d* and 7 *e*, palpus in two positions.

8. *Oxyopeidon putum*, ♀ : 8 *a*, profile ; 8 *b*, caput and falces from in front ; 8 *c*, genital aperture.

9. *Oxyopeidon flebile*, ♀ : 9 *a*, profile ; 9 *b*, caput and falces from in front ; 9 *c*, genital aperture.

10. *Oxyopeidon lætum*, ♀ : 10 *a*, profile ; 10 *b*, caput and falces from in front ; 10 *c*, genital aperture.

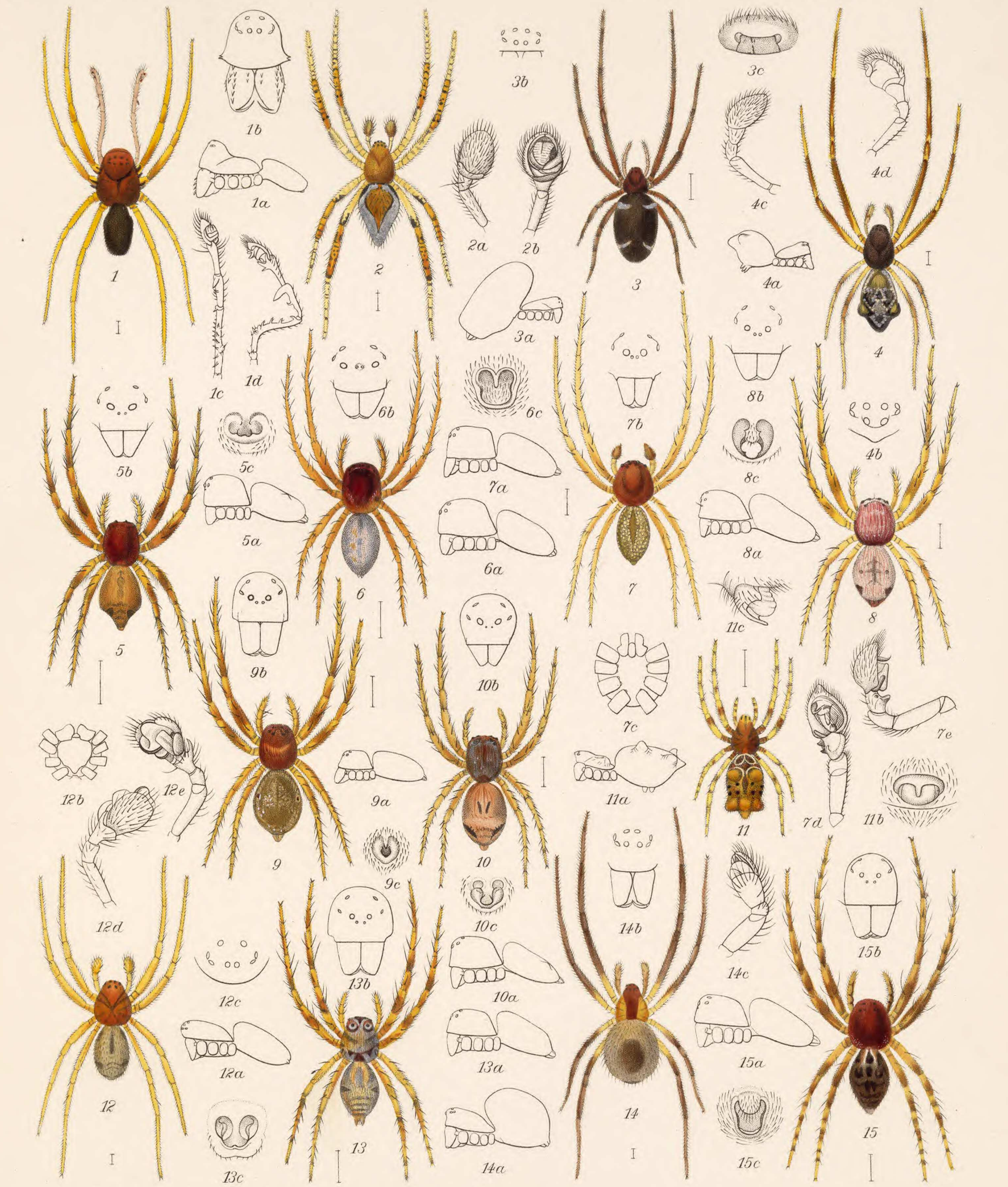
11. *Turckheimia diversa*, ♀ : 11 *a*, profile ; 11 *b*, genital aperture from above ; 11 *c*, genital aperture in profile.

12. *Itys pergrata*, ♂ : 12 *a*, profile ; 12 *b*, underside of cephalothorax showing maxillæ, labium, and sternum ; 12 *c*, eyes from in front ; 12 *d* and 12 *e*, palpus in two positions.

13. *Oxyopeidon difficile*, ♀ : 13 *a*, profile ; 13 *b*, caput and falces from in front ; 13 *c*, genital aperture.

14. *Theridion facetum*, ♂ : 14 *a*, profile ; 14 *b*, caput and falces from in front ; 14 *c*, palpus.

15. *Oxyopeidon molestum*, ♀ : 15 *a*, profile ; 15 *b*, caput and falces from in front ; 15 *c*, genital aperture.



1, 1a-d ♂ ERIGONE DENTOSA.
2, 2a, b ♂ EURYOPIS LINEATIPES.
3, 3a-c ♀ ARGYROEPEIRA MESOMELAS.
4, 4a-d ♂ ARGYRODES ARGENTEOLA.
5, 5a-c ♀ OXYOPEIDON SUBFACILE.
6, 6a-c ♀ OXYOPEIDON FACILE.
7, 7a-e ♂ ,, PUTUM.
8, 8a-c ♀ ,, ,,
9, 9a-c ♀ ,, FLEBILE.
10, 10a-c ♀ ,, LÆTUM.
11, 11a-c ♀ TURCKHEIMIA DIVERSA.
12, 12a-e ♂ ITYS PERGRATA.
13, 13a-c ♀ OXYOPEIDON DIFFICILE.
14, 14a-c ♂ THERIDION FACETUM.
15, 15a-c ♀ OXYOPEIDON MOLESTUM.

A.T. Hollick del. Edwin Wilson, Cambridge.

Black 3/Color White Magenta Red Yellow Green Cyan Blue
Kodak LICENSED PRODUCT © The Tiffen Company, 2000 KODAK Color Control Patches
Centimetres Inches

## PLATE XVII.

Fig. 1. *Frontina phœnicea*, ♂ : 1 *a*, profile ; 1 *b*, eyes and falces from in front ; 1 *c*, maxillæ, labium, and sternum ; 1 *d*, 1 *e*, and 1 *f*, palpus in different positions.

2. *Frontina phœnicea*, ♀ : 2 *a*, genital aperture.

3. *Mesopneustes nigrovittata*, var., ♂ : 3 *a*, profile ; 3 *b*, eyes and falces from in front ; 3 *c*, maxillæ, labium, and sternum ; 3 *d*, underside of abdomen showing position of spiracular orifices.

4. *Mesopneustes nigrovittata*, ♂ : 4 *a* and 4 *b*, palpus in two positions.

5. *Stemmops bicolor*, ♂ : 5 *a*, profile ; 5 *b*, eyes and falces from in front ; 5 *c*, eyes from above and in front ; 5 *d*, maxillæ, labium, and sternum ; 5 *e* and 5 *f*, palpus in two positions ; 5 *g*, underside of abdomen.

6. *Theridion purum*, ♀ : 6 *a*, profile ; 6 *b*, eyes from in front ; 6 *c*, genital aperture.

7. *Dysderina plena*, ♀ : 7 *a*, profile ; 7 *b*, eyes from in front ; 7 *c*, one of the legs enlarged to show the spines ; 7 *d*, underside of abdomen.

8. *Ariamnes approximata*, ♀ : 8 *a*, profile ; 8 *b*, eyes from in front and above ; 8 *c*, genital aperture.

9. *Ariamnes gracillima*, ♀ : 9 *a*, profile ; 9 *b*, eyes from in front ; 9 *c*, genital aperture.

10. *Ariamnes furcata*, ♀ : 10 *a*, profile ; 10 *b*, genital aperture.

11. *Achæa vittata*, ♀ : 11 *a*, profile ; 11 *b*, eyes from in front ; 11 *c*, genital aperture.

12. *Miagrammopes lineatus*, ♀ : 12 *a*, profile ; 12 *b*, more enlarged profile of cephalothorax ; 12 *c*, fore part of cephalothorax from above.

13. *Ochyrocera simoni*, ♂ : 13 *a*, profile ; 13 *b*, eyes and falces from in front ; 13 *c*, maxillæ, labium, and sternum ; 13 *d*, palpus.

14. *Xysticus pellax*, ♂ : 14 *a* and 14 *b*, palpus in two positions.

15. *Singa lutea*, ♂ : 15 *a*, profile ; 15 *b*, eyes and falces from in front ; 15 *c* and 15 *d*, palpus in two positions.

1, 1a-f ♂ FRONTINA PHŒNICEA.
2, 2a ♀ " "
3, 3a-d ♂ MESOPNEUSTES NIGROVITTATA, *var.*
4, 4a, b ♂ " "
5, 5a-g ♂ STEMMOPS BICOLOR.

6, 6a-c ♀ THERIDION PURUM.
7, 7a-d ♀ DYSDERINA PLENA.
8, 8a-c ♀ ARIAMNES APPROXIMATA.
9, 9a-c ♀ " GRACILLIMA.
10, 10a, b ♀ " FURCATA.

11, 11a-c ♀ ACHÆA VITTATA.
12, 12a-c ♀ MIAGRAMMOPES LINEATUS.
13, 13a-d ♂ OCHYROCERA SIMONI.
14, 14a, b ♂ XYSTICUS PELLAX.
15, 15a-d ♂ SINGA LUTEA.

A.T. Hollick del. Edwin Wilson, Cambridge

Black 3/Color White Magenta Red Yellow Green Cyan Blue
Kodak LICENSED PRODUCT © The Tiffen Company, 2000 KODAK Color Control Patches
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

## PLATE XVIII.

Fig. 1. *Phyllonethis thorellii*, ♂ : 1 *a*, 1 *b*, palpus in two positions.

2. *Anyphæna simplex*, ♂ : 2 *a*, profile without legs ; 2 *b*, eyes from in front ; 2 *c*, 2 *d*, palpus in two positions.

3. *Anyphæna simplex*, ♀ : 3 *a*, genital aperture.

4. *Tetragnatha pachygnathoides*, ♂ : 4 *a*, profile ; 4 *b*, eyes and falces from in front ; 4 *c*, maxillæ, labium, and sternum ; 4 *d*, 4 *e*, palpus in two positions.

5. *Phyllonethis thorellii*, var., ♀ : 5 *a*, profile ; 5 *b*, genital aperture.

6. *Myrmecotypus fuliginosus*, ♀ : 6 *a*, profile ; 6 *b*, eyes and falces from in front ; 6 *c*, maxillæ, labium, and sternum ; 6 *d*, genital aperture.

7. *Episinus putus*, ♂ : 7 *a*, profile ; 7 *b*, eyes from above and in front ; 7 *c*, 7 *d*, palpus in two positions.

8. *Meta flava*, ♂ : 8 *a*, profile ; 8 *b*, eyes from above and in front ; 8 *c*, 8 *d*, and 8 *e*, palpus in three positions.

9. *Tmarus mendax*, ♀ : 9 *a*, profile ; 9 *b*, eyes from above and in front ; 9 *c*, genital aperture.

10. *Amamra gibbifera*, ♀ : 10 *a*, profile ; 10 *b*, eyes and falces from in front ; 10 *c*, abdomen from behind ; 10 *d*, genital aperture.

11. *Epeirotypus brevipes*, ♀ : 11 *a*, profile ; 11 *b*, eyes from above and in front ; 11 *c*, underside, showing position of genital aperture ; 11 *d*, genital aperture in profile.

12. *Mimetus bigibbosus*, ♂ : 12 *a*, profile ; 12 *b*, eyes and falces from in front ; 12 *c*, 12 *d*, palpus in two positions.

Inches 1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Centimetres
KODAK Color Control Patches © The Tiffen Company, 2000
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1, 1a,b ♂ PHYLLONETHIS THORELLII.
2, 2a-d ♂ ANYPHAENA SIMPLEX.
3, 3a ♀ " "
4, 4a-e ♂ TETRAGNATHA PACHYGNATHOIDES.
5, 5a,b ♀ PHYLLONETHIS THORELLII, *var.*
6, 6a-d ♀ MYRMECOTYPUS FULIGINOSUS.
7, 7a-d ♂ EPISINUS PUTUS
8, 8a-e ♂ META FLAVA.
9, 9a-c ♀ TMARUS MENDAX.
10, 10a-d ♀ AMAMRA GIBBIFERA.
11, 11a-d ♀ EPEIROTYPUS BREVIPES.
12, 12a-d ♂ MIMETUS BIGIBBOSUS.

A.T.Hollick del. Edwin Wilson. Cambridge.

*Trans. Linn. Soc. Vol. IV.* *Araneidea. Tab. 18.*

## PLATE XIX.

Fig. 1. *Delozeugma depictum*, ♂: 1 *a*, profile; 1 *b*, eyes from in front; 1 *c* and 1 *d*, palpus in two positions.

2. *Euryopis spinigera*, ♂: 2 *a*, profile; 2 *b*, eyes from in front and above; 2 *c* and 2 *d*, palpus in two positions.

3. *Ervig albolineatus*, ♀: 3 *a*, profile; 3 *b*, sternum, maxillæ, and labium; 3 *c*, eyes from in front; 3 *d*, extremity of tarsus of leg; 3 *e*, genital aperture.

4. *Sphecotypus formicarius*, ♀: 4 *a*, maxillæ, labium, and sternum; 4 *b*, profile; 4 *c*, eyes from in front; 4 *d*, genital aperture.

5. *Amamra nigromaculata*, ♀: 5 *a*, profile; 5 *b*, maxillæ, labium, and sternum; 5 *c*, eyes from in front; 5 *d*, genital aperture and process from above; 5 *e*, ditto in profile.

6. *Favila relatus*, ♂: 6 *a*, profile; 6 *b*, sternum; 6 *c*, eyes from in front; 6 *d* and 6 *e*, palpus in two positions; 6 *f*, leg of 2nd pair.

7. *Synæma madida*, ♂: 7 *a*, profile; 7 *b* *, eyes from in front; 7 *c* and 7 *d*, palpus in two positions.

8. *Enrico mexicanus*, ♀: 8 *a*, profile; 8 *b*, eyes from in front; 8 *c*, sternum.

9. *Carepalxis nigriceps*, ♀: 9 *a*, profile; 9 *b*, eyes and caput from in front; 9 *c*, genital aperture; 9 *d*, abdomen from behind.

10. *Wulfila diversus*, ♀: 10 *a*, profile; 10 *b*, eyes from in front; 10 *c*, underside of abdomen.

11. *Wulfila pallidus*, ♀: 11 *a*, profile; 11 *b*, eyes from in front; 11 *c*, maxillæ, labium, and sternum; 11 *d*, underside of abdomen.

12. *Coleosoma flavipes*, ♂: 12 *a*, profile; 12 *b*, eyes from in front; 12 *c* and 12 *d*, palpus in two positions.

13. *Witica talis*, ♂: 13 *a*, profile; 13 *b*, eyes from in front; 13 *c*, maxillæ, labium, and sternum.

14. *Epeirotypus brevipes*, ♂: 14 *a*, profile; 14 *b*, eyes from behind and above; 14 *c* and 14 *d*, palpus in two positions; 14 *e*, egg-cocoon.

15. *Simonella decipiens*, ♂: 15 *a*, profile; 15 *b* and 15 *c*, palpus in two positions.

16. *Simonella decipiens*, ♀: 16 *a*, profile; 16 *b*, genital aperture.

17. *Rhane munda*, ♀: 17 *a*, profile; 17 *b*, genital aperture.

18. *Wulfila proximus*, ♀, underside of abdomen; 18 *a*, eyes from in front; 18 *b*, genital aperture.

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* By an oversight the *position* only of the hind-lateral eyes has been given.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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1, 1a–d ♂ DELOZEUGMA DEPICTUM.
2, 2a–d ♂ EURYOPIS SPINIGERA.
3, 3a–e ♀ ERYIG ALBOLINEATUS.
4, 4a–d ♀ SPHECOTYPUS FORMICARIUS.
5, 5a–e ♀ AMAMRA NIGROMACULATA.
6, 6a–f ♂ FAVILA RELATUS.
7, 7a–d ♂ SYNEMA MADIDA.
8, 8a–c ♀ ENRICO MEXICANUS.
9, 9a–d ♀ CAREPALXIS NIGRICEPS.
10, 10a–c ♀ WULFILA DIVERSUS.
11, 11a–d ♀ " PALLIDUS.
12, 12a–d ♂ COLEOSOMA FLAVIPES.
13, 13a–c ♂ WITICA TALIS.
14, 14a–e ♂ EFEIROTYPUS BREVIPES.
15, 15a–c ♂ SIMONELLA DECIPIENS.
16, 16a, b ♀ " "
17, 17a, b ♀ RHANE MUNDA.
18, 18a, b ♀ WULFILA PROXIMUS.

A.T. Hollick del. Edwin Wilson, Cambridge.

Trans. Linn. Soc. Vol. V. Pl. 19. Arachnida Araneidea.

## PLATE XX.

Fig. 1. *Phyllonethis adjacens*, ♀: 1 *a*, profile; 1 *b*, abdomen from above and behind; 1 *c*, genital aperture.

2. *Phyllonethis electa*, ♀: 2 *a*, profile; 2 *b*, underside of abdomen; 2 *c*, upperside of abdomen from behind; 2 *d*, genital aperture.

3. *Phyllonethis electa*, ♂: 3 *a*, falces from in front; 3 *b* and 3 *c*, palpus in different positions.

4. *Coccorchestes adjacens*, ♂: 4 *a*, profile; 4 *b*, cephalothorax from above and behind; 4 *c* and 4 *d*, palpus in different positions.

5. *Modisimus maculatipes*, ♀: 5 *a*, profile; 5 *b*, eyes from in front; 5 *c*, ditto, from above and behind; 5 *d*, genital aperture in profile; 5 *e*, ditto, from above.

6. *Modisimus putus*, ♀: 6 *a*, profile; 6 *b*, eyes from in front; 6 *c*, ditto, from in front and above; 6 *d*, genital aperture in profile; 6 *e*, ditto, from above.

7. *Modisimus inornatus*, ♀: 7 *a*, profile; 7 *b*, eyes from in front; 7 *c*, ditto, from above and behind; 7 *d*, genital aperture in profile; 7 *e*, ditto, from above.

8. *Episinus bigibbosus*, ♀: 8 *a*, profile; 8 *b*, eyes from above and behind; 8 *c*, one of the globular prominences on abdomen, enlarged; 8 *d*, genital aperture.

9. *Dolicognatha diversa*, ♀: 9 *a*, profile; 9 *b*, eyes from above and behind; 9 *c*, maxillæ, labium, and sternum; 9 *d*, abdomen from behind; 9 *e*, genital aperture.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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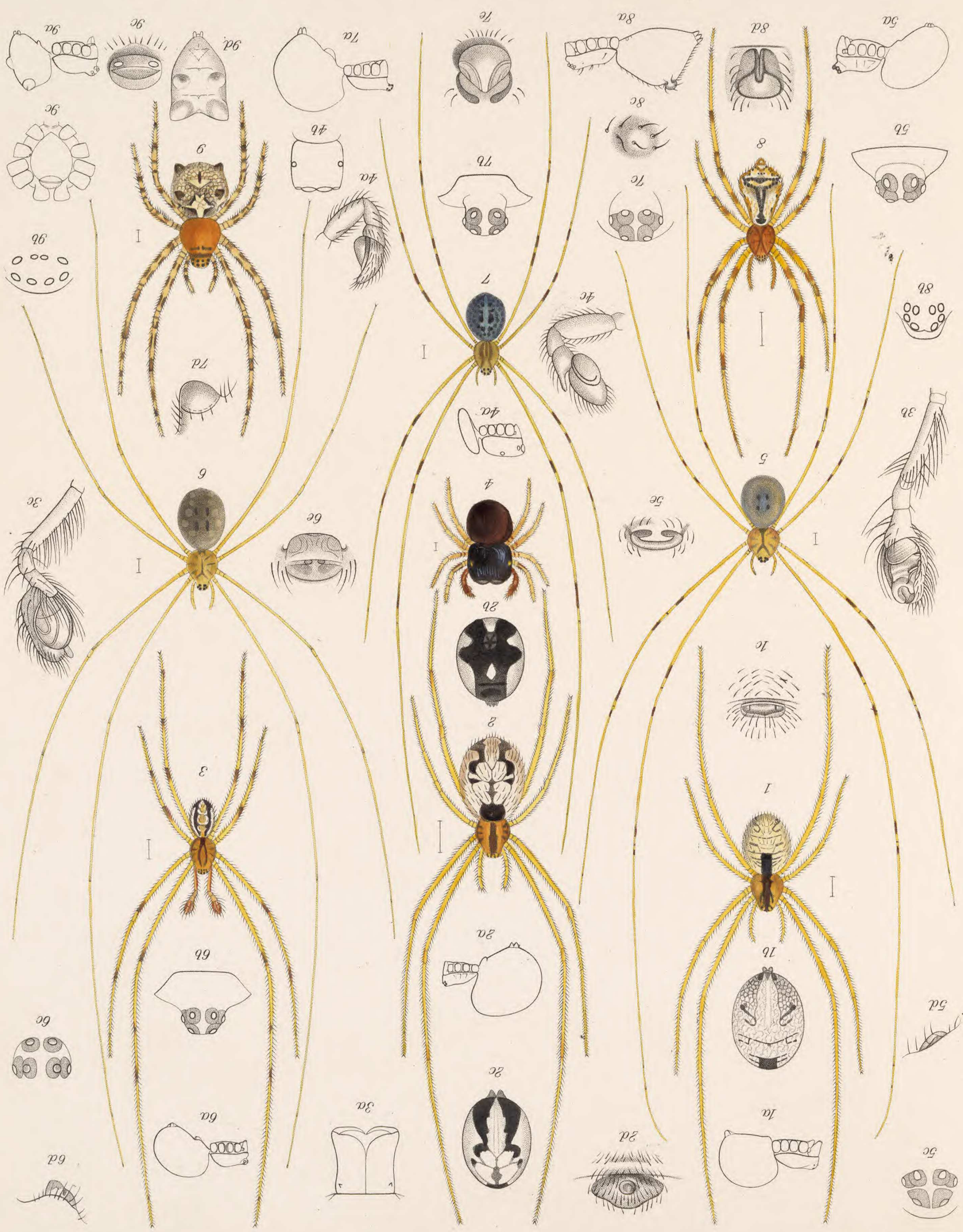
1, 1a-c ♀ PHYLLONETHIS ADJACENS. 4, 4a-d ♂ COCCORCHESTES ADJACENS. 7, 7a-e ♀ MODISIMUS INORNATUS.
2, 2a-d ♀ " " ELECTA. 5, 5a-e ♀ MODISIMUS MACULATIPES. 8, 8a-d ♀ EPISINUS BIGIBBOSUS.
3, 3a-c ♂ " " 6, 6a-e ♀ " PUTUS. 9, 9a-e ♀ DOLICOGNATHA DIVERSA.



*Trans. Linn. Soc. Vol. 20.* *Arachnida Araneidea. Tab. 20.*

# PLATE XXI.

Fig. 1. *Clubiona attigua*, ♂: 1 *a*, profile; 1 *b*, eyes and falces from above and behind; 1 *c*, ditto, from in front; 1 *d* and 1 *e*, palpus in two positions.

2. *Clubiona crocota*, ♂: 2 *a*, profile of cephalothorax; 2 *b*, eyes from above and behind; 2 *c*, ditto, from in front; 2 *d* and 2 *e*, palpus in two positions.

3. *Clubiona crocota*, ♀: 3 *a*, profile of cephalothorax; 3 *b*, genital aperture.

4. *Dictyna grandis*, ♀: 4 *a*, profile; 4 *b*, eyes from above and behind; 4 *c*, ditto, from in front; 4 *d*, genital aperture.

5. *Dictyna parietalis*, ♂: 5 *a*, profile; 5 *b*, eyes and falces from in front; 5 *c*, 5 *d*, and 5 *e*, palpus in three positions.

6. *Dictyna parietalis*, ♀: 6 *a*, profile; 6 *b*, genital aperture.

7. *Micromerys delicatus*, ♂: 7 *a*, profile; 7 *b*, eyes from in front; 7 *c*, palpus.

8. *Metagonia caudata*, ♀: 8 *a*, profile; 8 *b*, eyes from behind; 8 *c*, ditto, from in front; 8 *d*, genital aperture.

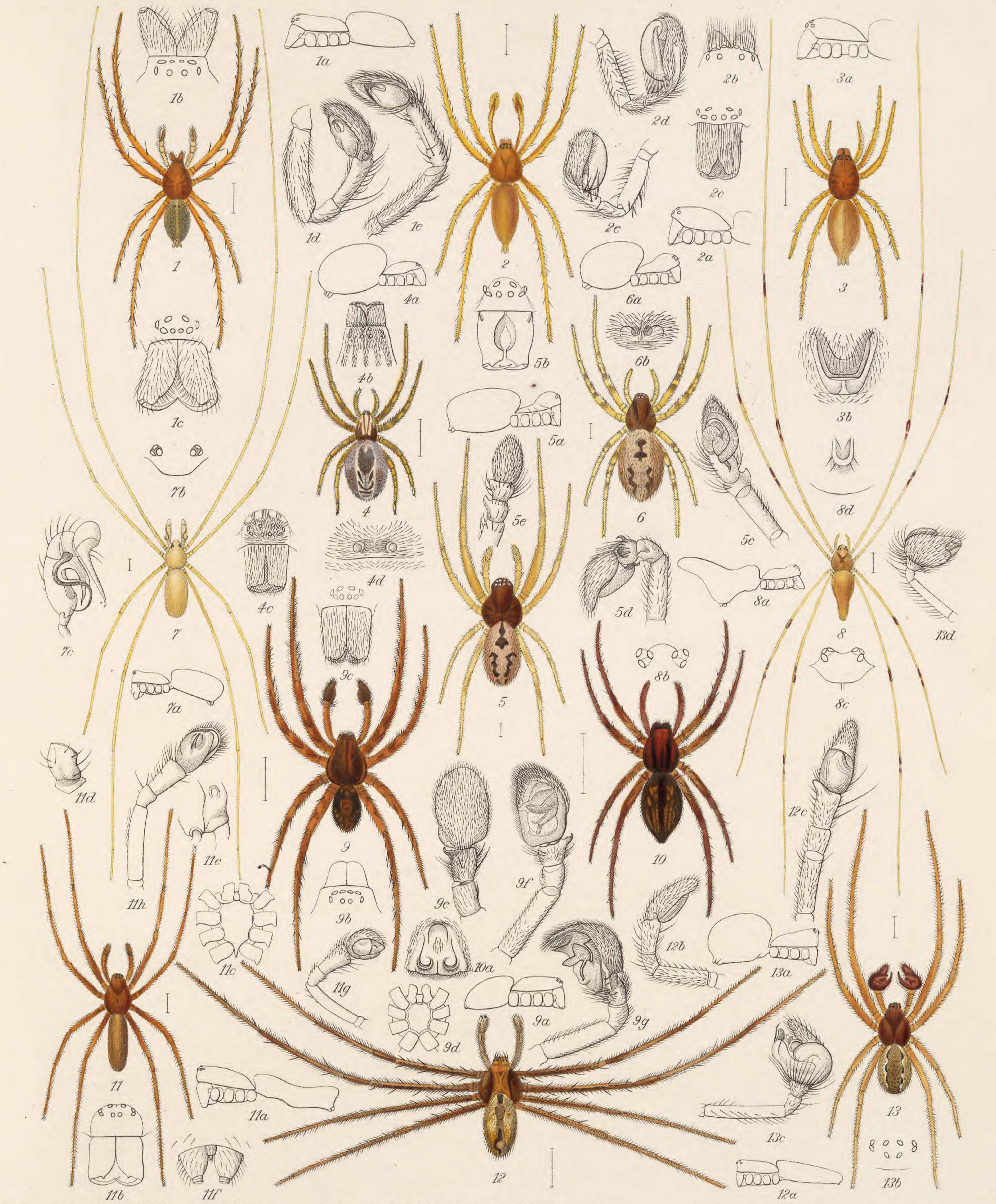
9. *Zorocrates mistus*, ♂: 9 *a*, profile; 9 *b*, eyes and falces from behind; 9 *c*, ditto, from in front; 9 *d*, maxillæ, labium, and sternum; 9 *e*, 9 *f*, and 9 *g*, palpus in three positions.

10. *Zorocrates mistus*, ♀: 10 *a*, genital aperture.

11. *Florinda mirifica*, ♂: 11 *a*, profile; 11 *b*, eyes and falces from in front; 11 *c*, maxillæ, labium, and sternum; 11 *d*, maxilla; 11 *e*, profile of maxilla and falces; 11 *f*, inferior pair of spinners and colulus between them; 11 *g* and 11 *h*, palpus in two positions.

12. *Thanatus longipes*, ♂: 12 *a*, profile; 12 *b* and 12 *c*, palpus in two positions.

13. *Theridion jucundum*, ♂: 13 *a*, profile; 13 *b*, eyes from in front; 13 *c* and 13 *d*, palpus in two positions.




1, 1a-e ♂ CLUBIONA ATTIGUA.
2, 2a-e ♂ " CROCOTA.
3, 3a, b ♀ " "
4, 4a-d ♀ DICTYNA GRANDIS.
5, 5a-e ♂ DICTYNA PARIETALIS.
6, 6a, b ♀ " "
7, 7a-c ♂ MICROMERYS DELICATUS.
8, 8a-d ♀ METAGONIA CAUDATA.
9, 9a-g ♂ ZOROCRATES MISTUS.
10, 10a ♀ ZOROCRATES MISTUS.
11, 11a-h ♂ FLORINDA MIRIFICA.
12, 12a-c ♂ THANATUS LONGIPES.
13, 13a-d ♂ THERIDION JUCUNDUM.

A.T. Hollick del. Edwin Wilson, Cambridge.

## PLATE XXII.

Fig. 1. *Xysticus facetus*, ♀: 1 *a*, profile; 1 *b*, eyes and falces from in front; 1 *c*, 1 *d*, 1 *e*, palpus in three positions.

2. *Synæma cirripes*, Cambr., ♀: 2 *a*, profile; 2 *b*, eyes and falces from in front; 2 *c*, genital aperture.

3. *Sparassus minax*, ♀: 3 *a*, genital aperture.

4. *Sparassus minax*, ♂: 4 *a*, profile; 4 *b*, eyes and falces from in front; 4 *c*, 4 *d*, 4 *e*, palpus in three positions.

5. *Agelena nova*, ♂: 5 *a*, profile; 5 *b*, eyes and falces from in front; 5 *c*, ditto, in different position; 5 *d*, 5 *e*, palpus in two positions.

6. *Lithyphantes quæsitus*, ♂: 6 *a*, profile; 6 *b*, eyes and falces from in front; 6 *d*, 6 *e*, palpus in two positions.

7. *Ataulfo nugax*, ♂: 7 *a*, profile; 7 *b*, eyes from in front; 7 *c*, ditto, in different position; 7 *d*, maxillæ, labium, and sternum; 7 *e*, 7 *f*, palpus in two positions.

8. *Temecula mexicana*, ♂: 8 *a*, profile; 8 *b*, eyes and falces from in front; 8 *c*, ditto, from behind; 8 *d*, maxillæ, labium, and sternum; 8 *e*, underside of tarsus and part of metatarsus of 4th pair of legs; 8 *f*, 8 *g*, 8 *h*, palpus in three positions.

9. *Triclaria habilis*, ♂: 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c*, ditto, from behind; 9 *d*, 9 *e*, 9 *f*, palpus in three positions.

10. *Triclaria extensa*, ♂ (natural size): 10 *a*, profile; 10 *b*, eyes from behind; 10 *c*, eyes and falces from in front; 10 *d*, maxillæ, labium, and sternum; 10 *e*, 10 *f*, palpus in two positions.

11. *Teudis mordax*, ♂: 11 *a*, profile; 11 *b*, eyes and falces from in front; 11 *c*, transverse spiracular opening beneath the abdomen; 11 *d*, 11 *e*, 11 *f*, palpus in three positions; 11 *g*, 11 *h*, profile of falx in two positions; 11 *i*, enlarged figure of apophysis on the radial joint of the palpus.

12. *Lithyphantes lætus*, ♂: 12 *a*, profile; 12 *b*, eyes from behind; 12 *c*, eyes and falces from in front; 12 *d*, underside of abdomen; 12 *e*, 12 *f*, palpus in two positions.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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1,1a-e ♂ XYSTICUS FACETUS.
2,2a-c ♀ SYNEMA CIRRIPES.
3,3a ♀ SPARASSUS MINAX.
4,4a-e ♂ " "
5,5a-e ♂ AGELENA NOVA.
6,6a-e ♂ LITHYPHANTES QUESITUS.
7,7a-f ♂ ATAULFO NUGAX.
8,8a-h ♂ TEMECULA MEXICANA.
9, 9a-f ♂ TRICLARIA HABILIS.
10,10a-f ♂ " EXTENSA.
11,11a-i ♂ TEUDIS MORDAX.
12,12a-f ♂ LITHYPHANTES LAETUS.




Black Garden Spiders.

Arachnida Araneidea Tab. 22.

# PLATE XXIII.

Fig. 1. *Anyphæna clubionoides*, ♂ : 1 *a*, profile; 1 *b*, eyes and falces from in front; 1 *c* and 1 *d*, palpus in two positions.

2. *Anyphæna clubionoides*, ♀ : 2 *a*, genital aperture.

3. *Opas lugens*, ♀ : 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, femur of 4th pair of legs; 3 *d*, genital aperture.

4. *Filistata tractans*, ♂ : 4 *a*, profile; 4 *b*, eyes from in front; 4 *c*, digital joint of palpus and palpal organs; 4 *d*, palpus.

5. *Edricus productus*, ♂ : 5 *a*, profile; 5 *b*, eyes and falces from in front; 5 *c*, maxillæ, labium, and sternum; 5 *d* and 5 *e*, palpus in two positions.

6. *Opas mœrens*, ♀ : 6 *a*, profile; 6 *b*, eyes and falces from in front; 6 *c*, maxillæ, labium, and sternum; 6 *d*, femur of 4th pair of legs; 6 *e*, genital aperture.

7. *Egilona munda*, ♂ : 7 *a*, profile; 7 *b*, falces from in front; 7 *c*, eyes from in front; 7 *d*, maxillæ, labium, and sternum; 7 *e*, 7 *f*, and 7 *g*, palpus in three positions.

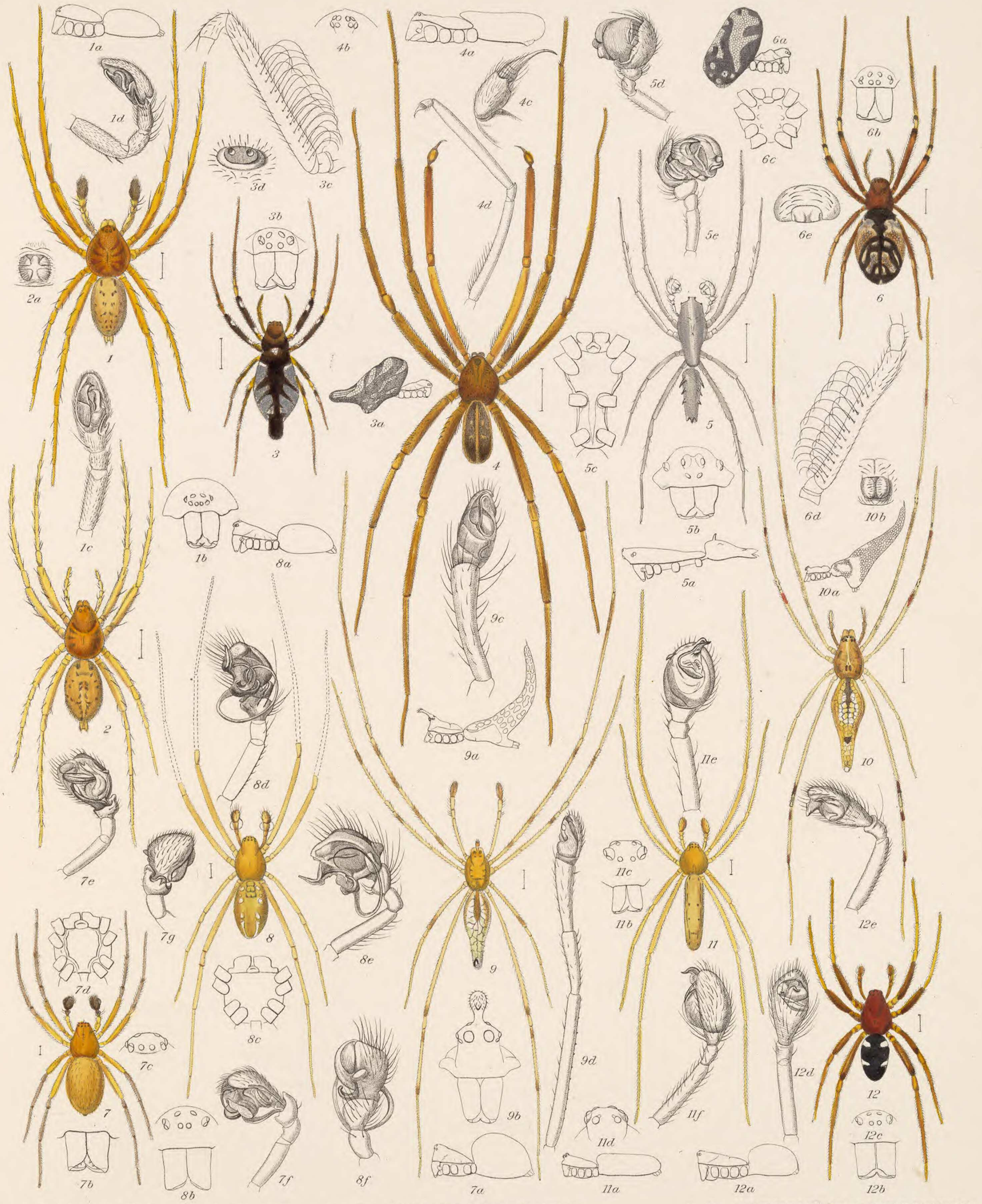
8. *Leptyphantes longispinosa*, ♂ : 8 *a*, profile; 8 *b*, eyes and falces from in front; 8 *c*, maxillæ, labium, and sternum; 8 *d*, 8 *e*, 8 *f*, and 8 *g*, palpus in different positions.

9. *Rhomphæa projiciens*, ♂ : 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c* and 9 *d*, palpus in two positions.

10. *Rhomphæa projiciens*, ♀ : 10 *a*, profile; 10 *b*, genital aperture.

11. *Spinthurus lineatus*, ♂ : 11 *a*, profile; 11 *b*, falces from in front; 11 *c*, eyes from in front; 11 *d*, 11 *e*, and 11 *f*, palpus in three positions.

12. *Asagena quadrimaculata*, ♂ : 12 *a*, profile; 12 *b* and 12 *c*, falces and eyes from in front; 12 *d* and 12 *e*, palpus in two positions.




1,1 a-d, ♂ ANYPHÆNA CLUBIONOIDES.
2,2 a, ♀ " "
3,3 a-d, ♀ OPAS LUGENS.
4,4 a-d, ♂ FILISTATA TRACTANS.
5,5 a-e, ♂ EDRICUS PRODUCTUS.
6,6 a-e, ♀ OPAS MŒRENS.
7,7 a-g, ♂ EGILONA MUNDA.
8,8 a-f, ♂ LEPTYPHANTES LONGISPINOSA.
9,9 a-d, ♂ RHOMPHÆA PROJICIENS.
10,10 a,b, ♀ " "
11,11 a-f, ♂ SPINTHARUS LINEATUS.
12,12 a-e, ♂ ASAGENA 4-MACULATA.

A.T.Hollick del.

Edwin Wilson, Cambridge.

## PLATE XXIV.

Fig. 1. *Wamba congener*, ♂ : 1 *a*, profile; 1 *b*, eyes and falces from in front; 1 *c*, eyes from above and behind; 1 *d*, maxillæ, labium, and sternum; 1 *e* and 1 *f*, palpus in two positions.

2. *Spintharus affinis*, ♂ : 2 *a*, profile; 2 *b* and 2 *c*, eyes and falces from in front; 2 *d*, eyes from above and behind; 2 *e* and 2 *f*, palpus in two positions.

3. *Majella affinis*, ♀ : 3 *a*, profile; 3 *b*, fore part of caput and eyes from above; 3 *c*, caput, eyes, and falces from in front; 3 *d*, maxillæ and labium.

4. *Dysderina plena*, ♂ : 4 *a*, profile; 4 *b*, caput, eyes, and falces from in front; 4 *c* and 4 *d*, palpus in two positions; 4 *e*, leg showing spiny armature.

5. *Andrasta globosa*, ♂ : 5 *a*, profile; 5 *b*, eyes and falces from in front; 5 *c*, maxillæ, labium, and sternum; 5 *d*, 5 *e*, and 5 *f*, palpus in three positions.

6. *Andrasta globosa*, ♀ : 6 *a*, profile; 6 *b*, genital aperture.

7. *Pelayo lætus*, ♂ : 7 *a*, profile; 7 *b*, eyes from above and behind; 7 *c*, eyes and falces from in front; 7 *d*, maxillæ, labium, and sternum; 7 *e* and 7 *f*, palpus in two positions.

8. *Theridion munifex*, ♀ : 8 *a*, profile; 8 *b*, caput, eyes, and falces from in front; 8 *c*, genital aperture.

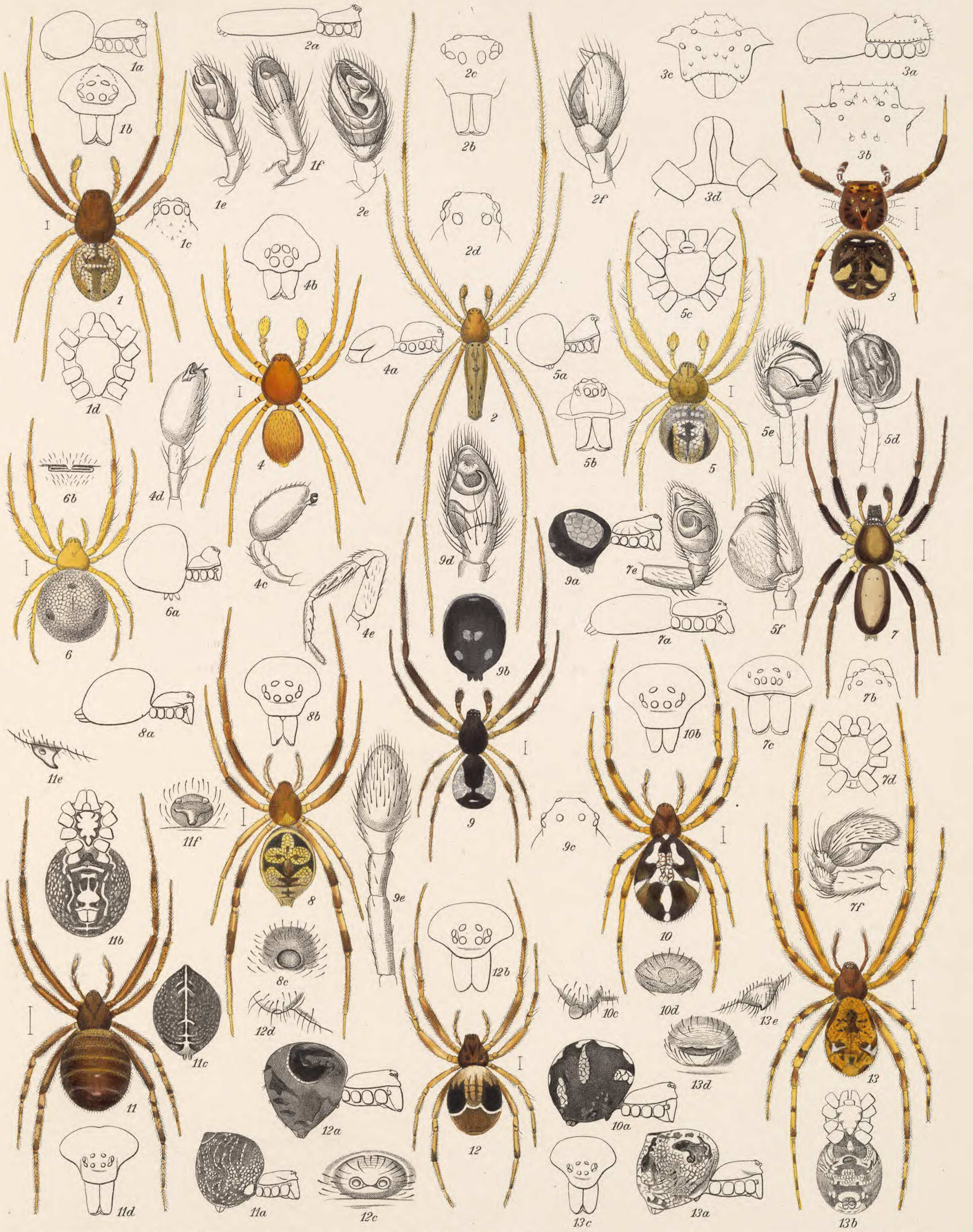
9. *Argyrodes argenteo-maculata*, ♂ : 9 *a*, profile; 9 *b*, hinder side of the abdomen; 9 *c*, eyes from above and behind; 9 *d* and 9 *e*, palpus in two positions.

10. *Theridion rostratum*, ♀ : 10 *a*, profile; 10 *b*, caput, eyes, and falces from in front; 10 *c*, genital aperture in profile; 10 *d*, genital aperture from above.

11. *Theridion mixtum*, ♀ : 11 *a*, profile; 11 *b*, underside; 11 *c*, hinder side of the abdomen; 11 *d*, caput, eyes, and falces from in front; 11 *e*, genital aperture in profile; 11 *f*, genital aperture from above.

12. *Theridion florens*, ♀ : 12 *a*, profile; 12 *b*, caput, eyes, and falces from in front; 12 *c*, genital aperture; 12 *d*, genital aperture in profile.

13. *Theridion oblivium*, ♀ : 13 *a*, profile; 13 *b*, underside; 13 *c*, caput, eyes, and falces from in front; 13 *d*, genital aperture; 13 *e*, ditto in profile.



1, 1a-f ♂ WAMBA CONGENER.
2, 2a-f ♂ SPINTHARUS AFFINIS.
3, 3a-d ♀ MAJELLA AFFINIS.
4, 4a-e ♂ DYSDERINA PLENA.
5, 5a-f ♂ ANDRASTA GLOBOSA.
6, 6a, b ♀ " "
7, 7a-f ♂ PELAYO LÆTUS.
8, 8a-c ♀ THERIDION MUNIFEX.
9, 9a-e ♂ ARGYRODES ARGENTEO-MACULATA.
10, 10a-d ♀ THERIDION ROSTRATUM.
11, 11a-f ♀ " MIXTUM.
12, 12a-d ♀ " FLORENS.
13, 13a-e ♀ " OBLIVIUM.

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## PLATE XXV.

Fig. 1. *Theridula tricornis*, ♀: 1 *a*, profile; 1 *b*, cephalothorax, eyes, and falces from in front, and rather above; 1 *c*, underside; 1 *d*, genital aperture.

2. *Thwaitesia affinis*, ♀: 2 *a*, profile; 2 *b*, hinder part of abdomen from spinners to apex.

3. *Thwaitesia affinis*, ♂: 3 *a*, profile; 3 *b*, cephalothorax, eyes, and falces from above and in front; 3 *c* and 3 *d*, palpus in two positions.

4. *Asagena mœsta*, ♀: 4 *a*, profile; 4 *b*, cephalothorax, eyes, and falces from in front; 4 *c*, genital aperture.

5. *Thwaitesia lepida*, ♀: 5 *a*, profile; 5 *b*, cephalothorax, eyes, and falces from above and in front; 5 *c*, genital aperture; 5 *d*, ditto, in profile.

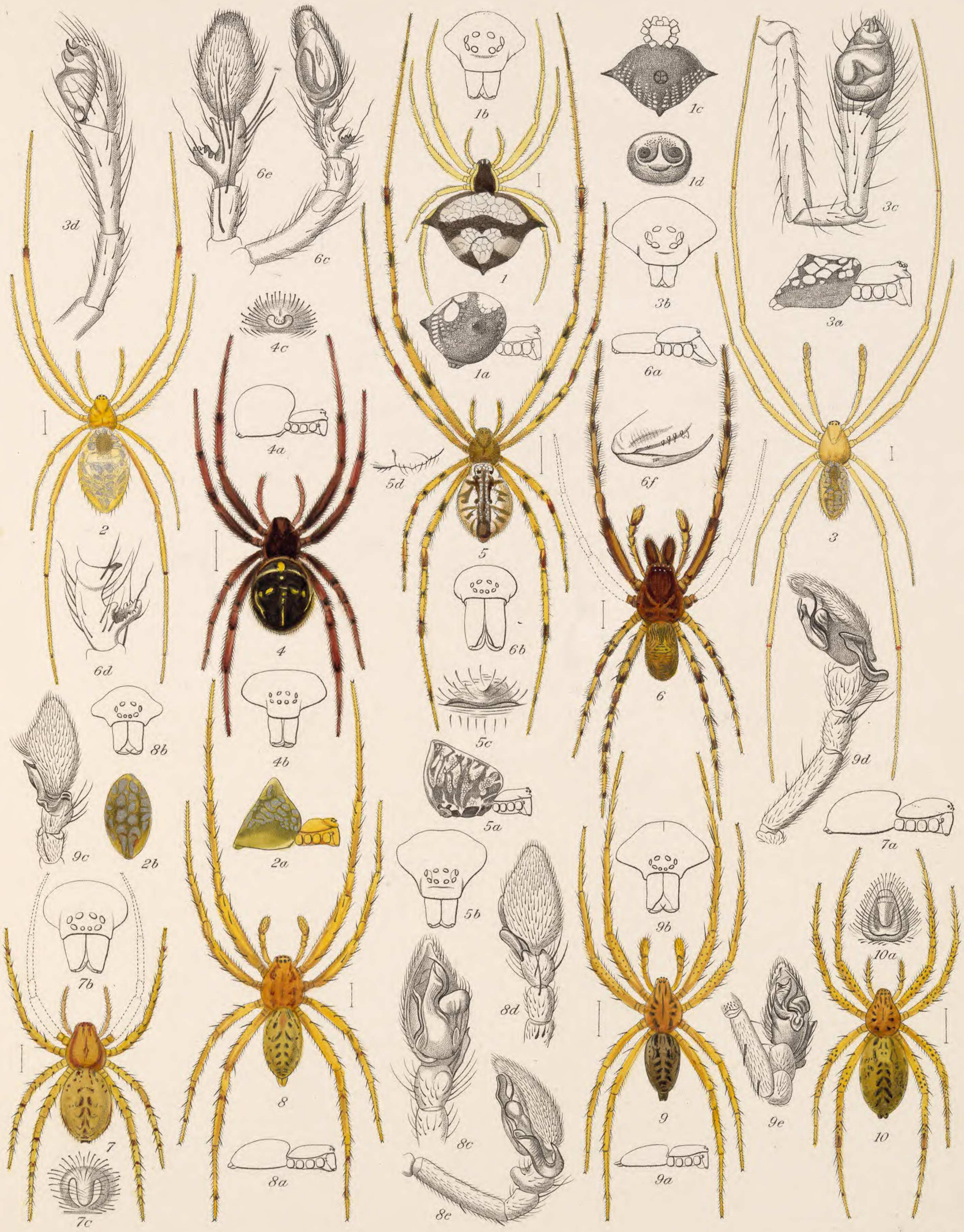
6. *Teudis gentilis*, ♂: 6 *a*, profile; 6 *b*, cephalothorax, eyes, and falces from in front; 6 *c*, 6 *d*, 6 *e*, palpus in different positions; 6 *f*, portion of falx, and fang in profile.

7. *Anyphæna excepta*, ♀: 7 *a*, profile; 7 *b*, cephalothorax, falces, and eyes from in front; 7 *c*, genital aperture.

8. *Anyphæna subgibba*, ♂: 8 *a*, profile; 8 *b*, cephalothorax, eyes, and falces from in front; 8 *c*, 8 *d*, 8 *e*, palpus in different positions.

9. *Anyphæna gibbosa*, ♂: 9 *a*, profile; 9 *b*, cephalothorax, eyes, and falces from in front; 9 *c*, 9 *d*, 9 *e*, palpus in different positions.

10. *Anyphæna gibbosa*, ♀: 10 *a*, genital aperture.




1, 1a-d ♀ THERIDULA TRICORNIS.
2, 2a,b ♀ THWAITESIA AFFINIS.
3, 3a-d ♂ „ „ .

4, 4a-c ♀ ASAGENA MŒSTA.
5, 5a-d ♀ THWAITESIA LEPIDA.
6, 6a-f ♂ TEUDIS GENTILIS.
7, 7a-c ♀ ANYPHÆNA EXCEPTA.

8, 8a-e ♂ ANYPHÆNA SUBGIBBA.
9, 9a-e ♂ „ GIBBOSA.
10, 10a ♀ „ „

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# PLATE XXVI.

Fig. 1. *Argyrodes aurea,* ♀ : 1 *a,* profile; 1 *b,* cephalothorax and falces from in front; 1 *c,* genital aperture.

2. *Anyphæna* (*Aysha,* Keys.) *puta,* ♀ : 2 *a,* profile; 2 *b,* cephalothorax and falces from in front; 2 *c,* genital aperture.

3. *Anyphæna larvata,* ♀ : 3 *a,* profile; 3 *b,* cephalothorax and falces from in front; 3 *c,* genital aperture.

4. *Anyphæna judicata,* ♂ : 4 *a,* profile; 4 *b,* cephalothorax and falces from in front; 4 *c,* 4 *d,* and 4 *e,* palpus in three positions.

5. *Anyphæna proba,* ♂ : 5 *a,* profile; 5 *b,* cephalothorax and falces from in front; 5 *c,* 5 *d,* and 5 *e,* palpus in three positions.

6. *Episinus bigibbosus,* ♂ : 6 *a,* profile; 6 *b,* cephalothorax and falces from in front; 6 *c,* portion of palpus.

7. *Anyphæna gibba,* ♂ : 7 *a,* profile; 7 *b,* cephalothorax and falces from in front; 7 *c,* 7 *d,* and 7 *e,* palpus in three positions.

8. *Liocranum mirabile,* ♂ : 8 *a,* profile; 8 *b,* eyes from behind and above; 8 *c,* eyes and falces from in front; 8 *d,* 8 *e,* and 8 *f,* palpus in three positions.

9. *Liocranum mirabile,* ♀ : 9 *a,* genital aperture.

10. *Cragus pallidus,* ♂ : 10 *a,* profile; 10 *b,* eyes and falces from in front; 10 *c,* maxillæ, labium, and sternum; 10 *d,* 10 *e,* and 10 *f,* palpus in three positions.

11. *Achæa crocea,* ♂ : 11 *a,* profile; 11 *b,* eyes from above and behind; 11 *c,* eyes and falces from in front; 11 *d* and 11 *e,* palpus in two positions.

12. *Filistata insignis,* ♂ : 12 *a,* eyes from above and behind; 12 *b,* eyes and falces from in front; 12 *c* and 12 *d,* palpus in two positions.

13. *Synæma prosper,* ♂ : 13 *a,* profile; 13 *b,* eyes from above and behind; 13 *c,* eyes and falces from in front; 13 *d* and 13 *e,* palpus in two positions.

14. *Pedo ornatus,* ♀ : 14 *a,* profile; 14 *b,* eyes from above and behind; 14 *c,* eyes and falces from in front; 14 *d,* maxillæ, labium, and sternum; 14 *e,* genital aperture.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

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1, 1a-c ♀ ARGYRODES AUREA.
2, 2a-c ♀ ANYPHÆNA PUTA.
3, 3a-c ♀ " LARVATA.
4, 4a-e ♂ " JUDICATA.
5, 5a-e ♂ " PROBA.
6, 6a-c ♂ EPISINUS BIGIBBOSUS.
7, 7a-e ♂ ANYPHÆNA GIBBA.
8, 8a-f ♂ LIOCRANUM MIRABILE.
9, 9a ♀ " "
10, 10a-f ♂ CRAGUS PALLIDUS.
11, 11a-e ♂ ACHÆA CROCEA.
12, 12a-d ♂ FILISTATA INSIGNIS.
13, 13a-e ♂ SYNÆMA PROSPER.
14, 14a-e ♀ PEDO ORNATUS.

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Trans. Linn. Soc. Vol. 26.

## PLATE XXVII.

Fig. 1. *Helvidius lugubris*, ♀ : 1 *a*, profile; 1 *b*, eyes from above and behind; 1 *c*, eyes and falces from in front; 1 *d*, maxillæ, labium, and sternum; 1 *e*, genital aperture.

2. *Ervig propinquus*, ♀ : 2 *a*, profile; 2 *b*, eyes from above and behind; 2 *c*, eyes and falces from in front; 2 *d*, maxillæ, labium, and sternum; 2 *e*, underside of abdomen.

3. *Hypognatha nasuta*, var., ♂ : 3 *a*, profile; 3 *b*, caput and eyes from above and behind; 3 *c*, ditto, from in front.

4. *Hypognatha nasuta*, ♂.

5. *Hypognatha nasuta*, ♀ : 5 *a*, genital aperture.

6. *Ervig albolineatus*, ♂ : 6 *a*, profile; 6 *b*, eyes and caput from above and behind; 6 *c*, ditto, from in front; 6 *d*, 6 *e*, palpus in two positions.

7. *Carepalxis rotunda*, ♀ : 7 *a*, profile; 7 *b*, caput and eyes from above and behind; 7 *c*, ditto, from in front; 7 *d*, genital aperture.

8. *Modisimus propinquus*, ♂ : 8 *a*, profile; 8 *b*, eyes and caput from above and behind; 8 *c*, ditto, from in front; 8 *d*, 8 *e*, palpus in two positions; 8 *f*, genital aperture of ♀.

9. *Ariston albicans*, ♀ : 9 *a*, profile; 9 *b*, caput and eyes from above and behind; 9 *c*, ditto, from in front; 9 *d*, maxillæ, labium, and sternum.

10. *Spermophora placens*, ♀ : 10 *a*, profile; 10 *b*, eyes from above and behind; 10 *c*, ball of eggs.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
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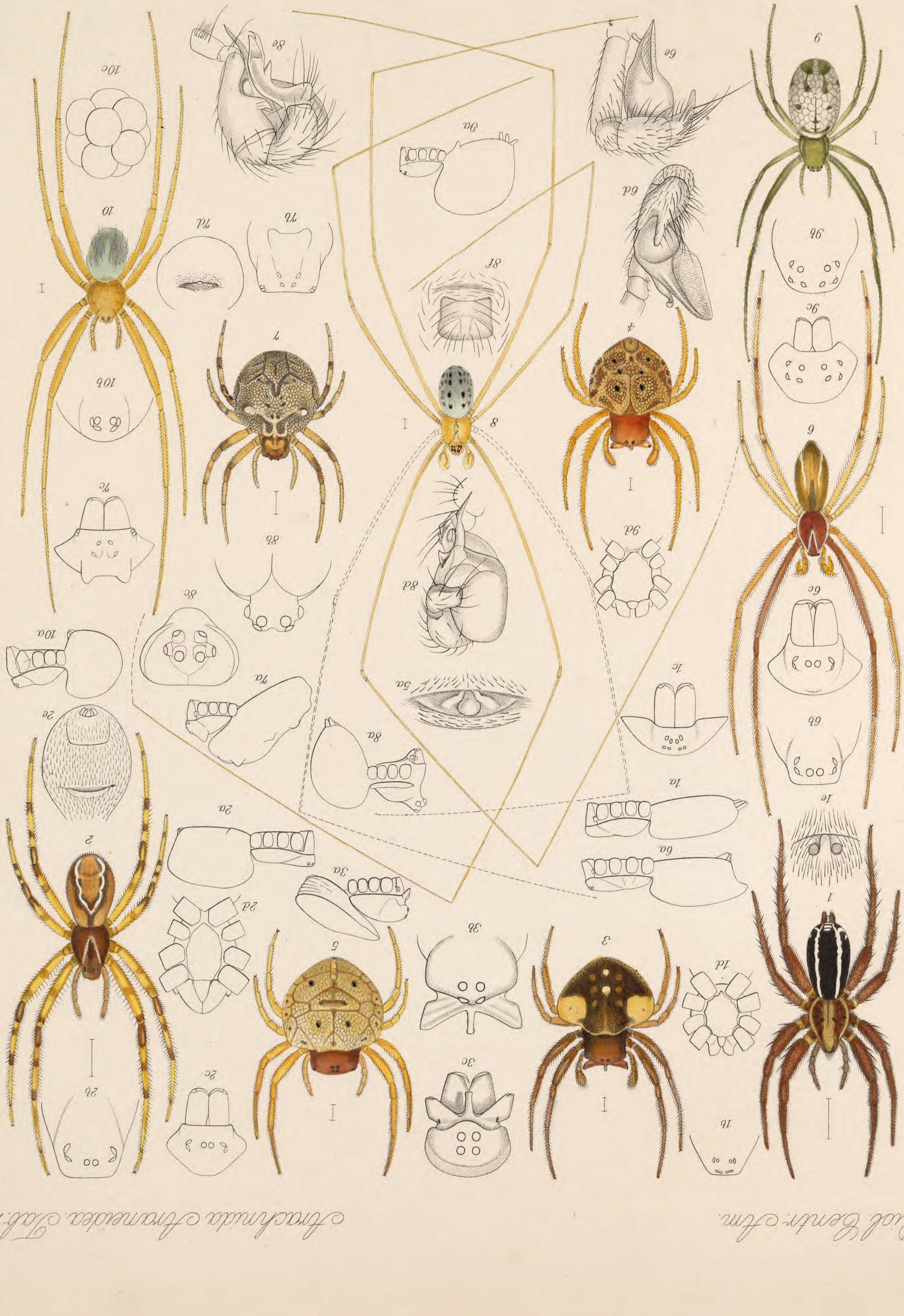
1,1a-e ♀ HELVIDIUS LUGUBRIS.
2,2a-e ♀ ERVIG PROPINQUUS.
3,3a-c ♂ HYPOGNATHA NASUTA, var.
4 ♂ " "

5,5a ♀ HYPOGNATHA NASUTA.
6,6a-e ♂ ERVIG ALBOLINEATUS.
7,7a-d ♀ CAREPALXIS ROTUNDA.

8,8a-e ♂ MODISIMUS PROPINQUUS.
8f ♀ " "
9,9a-d ♀ ARISTON ALBICANS.
10,10a-c ♀ SPERMOPHORA PLACENS.



Black Ferns of Fm. Arachnida Araneidea. Tab. 27.

## PLATE XXVIII.

Fig. 1. *Delozeugma mordicans*, ♂: 1 *a*, profile; 1 *b*, eyes from above and behind; 1 *c*, eyes and falces from in front; 1 *d*, falx and fang from beneath; 1 *e*, ditto, in profile; 1 *f* and 1 *g*, palpus in different positions.

2. *Meta superans*, ♂: 2 *a*, profile; 2 *b*, eyes and falces from in front; 2 *c*, 2 *d*, and 2 *e*, palpus in different positions.

3. *Labdacus prolatus*, ♂: 3 *a*, profile; 3 *b*, eyes from above and behind; 3 *c*, eyes and falces from in front; 3 *d*, 3 *e*, 3 *f*, palpus in different positions.

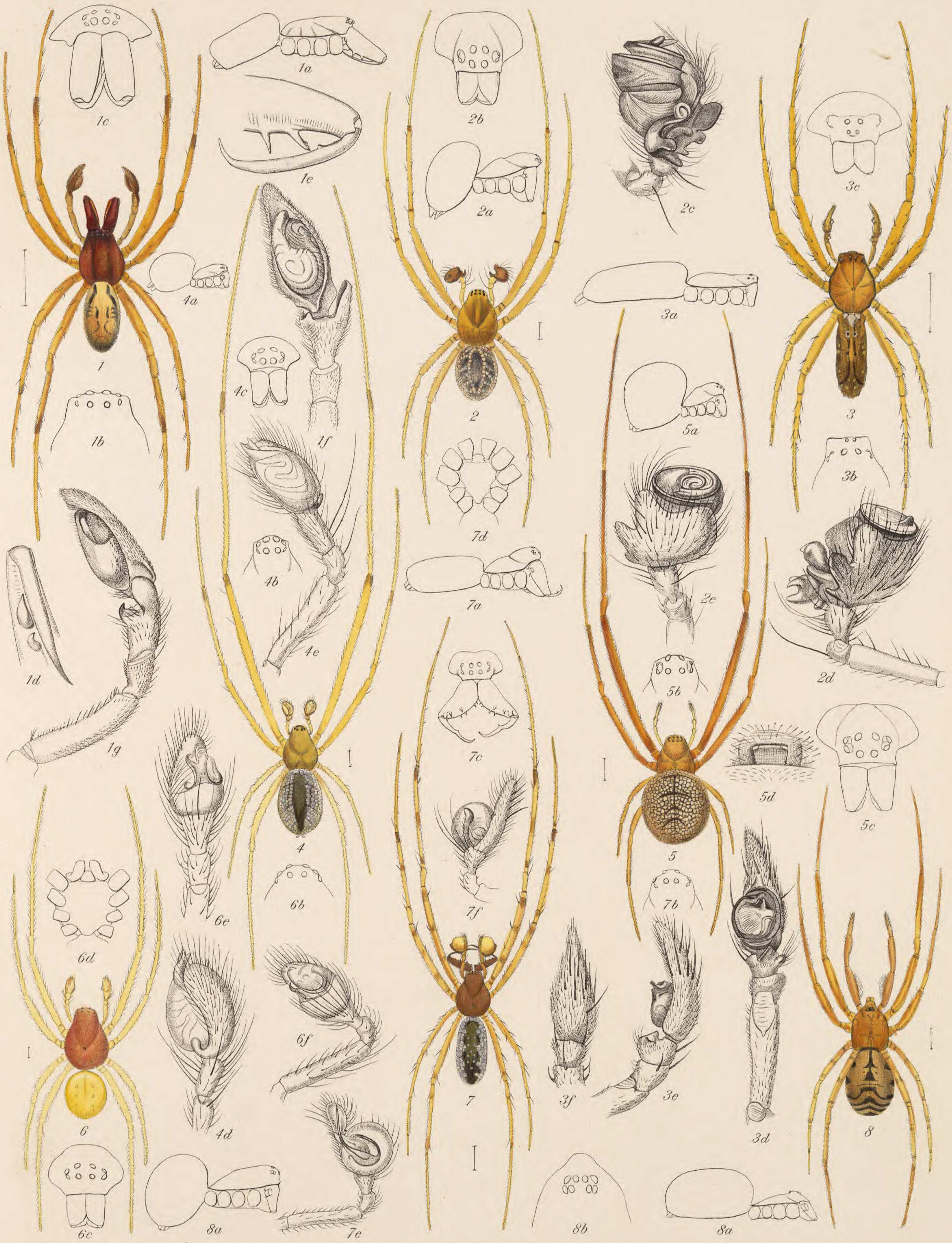
4. *Argyroepeira debilis*, ♂: 4 *a*, profile; 4 *b*, eyes from above and behind; 4 *c*, eyes and falces from in front; 4 *d* and 4 *e*, palpus in different positions.

5. *Argyroepeira debilis*, ♀: 5 *a*, profile; 5 *b*, eyes from above and behind; 5 *c*, eyes and falces from in front; 5 *d*, genital aperture.

6. *Liger incomta*, ♂: 6 *a*, profile; 6 *b*, eyes from in front and behind; 6 *c*, eyes and falces from in front; 6 *d*, maxillæ, labium, and sternum; 6 *e* and 6 *f*, palpus in different positions.

7. *Agriognatha bella*, ♂: 7 *a*, profile; 7 *b*, eyes from above and behind; 7 *c*, eyes and falces from in front; 7 *d*, maxillæ, labium, and sternum; 7 *e* and 7 *f*, palpus in different positions.

8. *Filistata insignis*, ♀: 8 *a*, profile; 8 *b*, eyes from above and behind.




1, 1 a-g ♂ DELOZEUGMA MORDICANS.
2, 2 a-e ♂ META SUPERANS.
3, 3 a-f ♂ LABDACUS PROLATUS.
4, 4 a-e ♂ ARGYROEPEIRA DEBILIS.
5, 5 a-d ♀ ,, ,, .
6, 6 a-f ♂ LIGER INCOMTA.
7, 7 a-f ♂ AGRIOGNATHA BELLA.
8, 8 a,b ♀ FILISTATA INSIGNIS.

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# PLATE XXIX.

Fig. 1. *Decetia incisa*, ♀: 1 *a*, profile; 1 *b*, cephalothorax and eyes from in front; 1 *c*, underside of abdomen, and genital aperture.

2. *Argyroepeira aurostriata*, ♂: 2 *a*, profile; 2 *b*, cephalothorax and eyes from in front; 2 *c* and 2 *d*, palpus in two positions.

3. *Argyroepeira aurostriata*, ♀: 3 *a*, profile; 3 *b*, cephalothorax and eyes from in front; 3 *c*, genital aperture from above; 3 *d*, ditto, in profile.

4. *Aysha simplex*, ♂: 4 *a*, profile; 4 *b*, cephalothorax and eyes from in front; 4 *c*, underside of abdomen, showing short transverse slit in front; 4 *d*, 4 *e*, and 4 *f*, palpus in different positions.

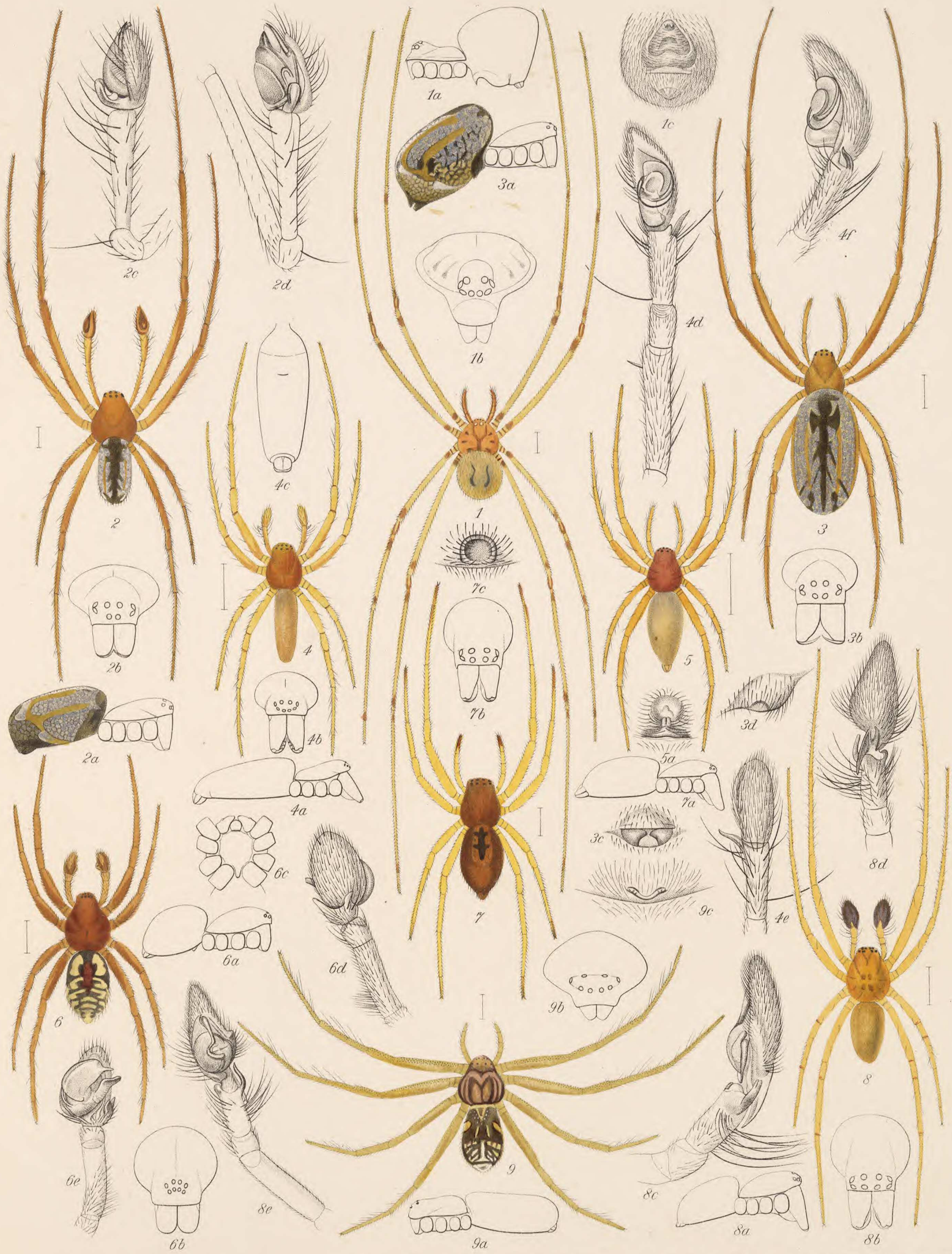
5. *Aysha simplex*, ♀: 5 *a*, genital aperture.

6. *Tenedos lautus*, ♂: 6 *a*, profile; 6 *b*, cephalothorax and eyes from in front; 6 *c*, maxillæ, labium, and sternum; 6 *d* and 6 *e*, palpus in two positions.

7. *Chiracanthium debile*, ♀: 7 *a*, profile; 7 *b*, cephalothorax and eyes from in front and above; 7 *c*, genital aperture.

8. *Chiracanthium ferum*, ♂: 8 *a*, profile; 8 *b*, cephalothorax and eyes from above and in front; 8 *c*, 8 *d*, and 8 *e*, palpus in different positions.

9. *Philodromus albicans*, ♀: 9 *a*, profile; 9 *b*, cephalothorax and eyes from in front; 9 *c*, genital aperture.




1, 1a–c ♀ DECETIA INCISA.
2, 2a–d ♂ ARGYROEPEIRA AUROSTRIATA.
3, 3a–d ♀ ” ”

4, 4a–f ♂ AYSHA SIMPLEX.
5, 5a ♀ ” ”
6, 6a–e ♂ TENEDOS LAUTUS.

7, 7a–c ♀ CHIRACANTHIUM DEBILE.
8, 8a–e ♂ ” FERUM.
9, 9a–c ♀ PHILODROMUS ALBICANS.

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## PLATE XXX.

Fig. 1. *Triclaria connexa*, ♂ : 1 *a*, profile; 1 *b*, cephalothorax, eyes, and falces from in front; 1 *c*, 1 *d*, 1 *e*, palpus in three positions.

2. *Enna velox*, ♂ : 2 *a*, profile; 2 *b*, cephalothorax, eyes, and falces from in front; 2 *c*, 2 *d*, palpus in two positions.

3. *Enna velox*, ♀ : 3 *a*, profile; 3 *b*, genital aperture.

4. *Hubba insignis*, ♂ : 4 *a*, profile; 4 *b*, maxillæ, labium, and sternum; 4 *c*, eyes and falces from in front; 4 *d*, 4 *e*, palpus in two positions.

5. *Bion brevis*, ♂ : 5 *a*, profile; 5 *b* *, eyes and falces from in front; 5 *c*, 5 *d*, 5 *e*, palpus in three positions; 5 *f*, eyes from above and behind; 5 *g*, maxillæ, labium, and sternum.

6. *Elaver tigrina*, ♂ : 6 *a*, profile; 6 *b*, eyes and falces from in front; 6 *c*, maxillæ, labium, and sternum; 6 *d*, eyes from above and behind; 6 *e*, 6 *f*, 6 *g*, palpus in three positions.

7. *Elaver tigrina*, ♀ : genital aperture.

8. *Ariadne comata*, ♀ : 8 *a*, eyes from behind and above; 8 *b*, eyes and falces from in front; 8 *c*, genital aperture.

9. *Ariadne pilifera*, ♀ : 9 *a*, eyes from above and behind; 9 *b*, eyes and falces from in front; 9 *c*, genital aperture.

10. *Elaver depuncta*, ♀ : 10 *a*, profile; 10 *b*, eyes and falces from in front; 10 *c*, eyes and falces from above and behind; 10 *d*, genital aperture.

11. *Elaver sericea*, ♀ : 11 *a*, profile; 11 *b*, eyes and falces from in front; 11 *c*, eyes from above and behind; 11 *d*, genital aperture in profile; 11 *e*, genital aperture from in front.

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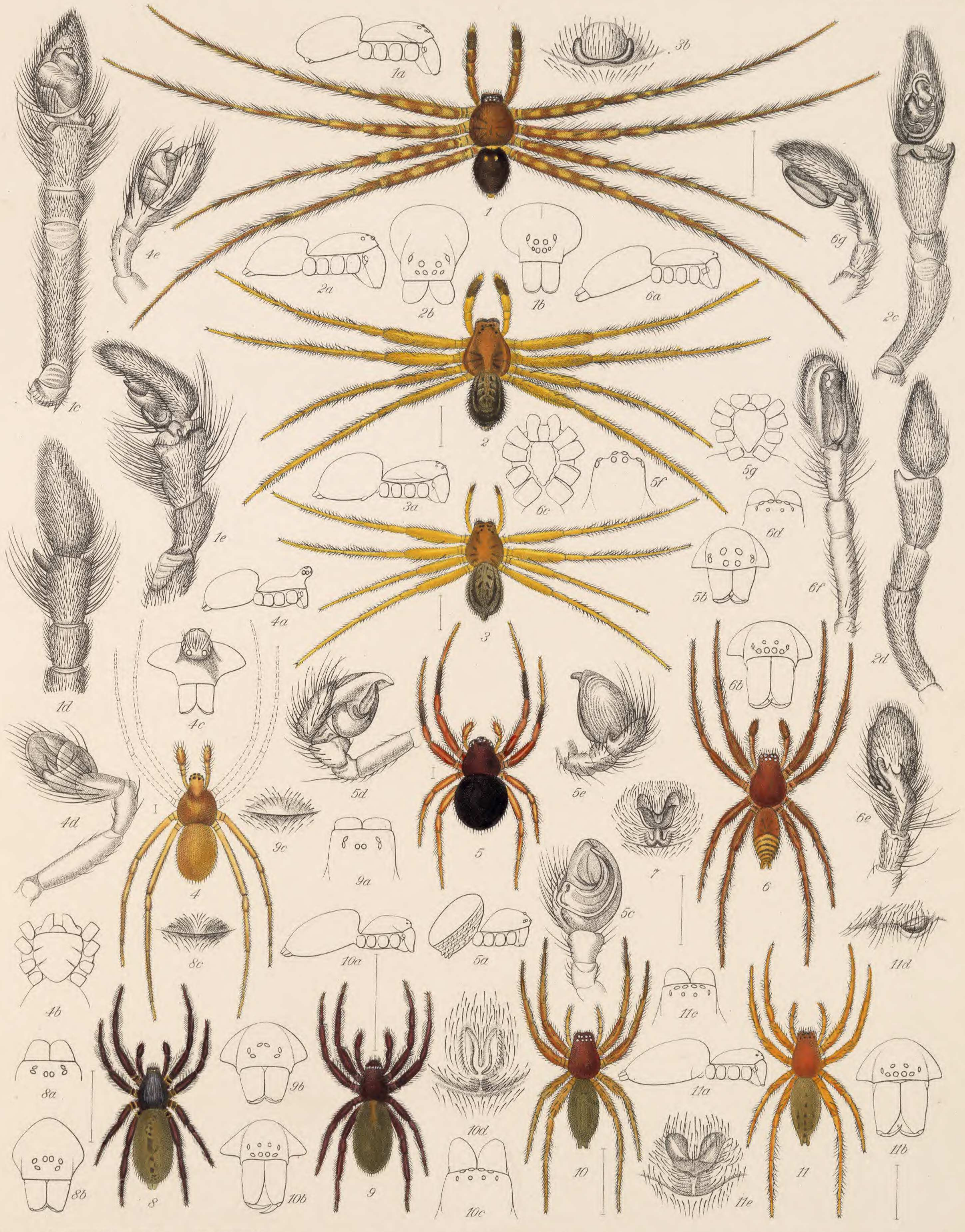
* In this figure (5 *b*) the engraver has made the hind-central pair of eyes rather too wide apart: *vide* fig. 5 *f*.



1, 1 a-e ♂ TRICLARIA CONNEXA.
2, 2 a-d ♂ ENNA VELOX.
3, 3 a, b ♀ " "
4, 4 a-e ♂ HUBBA INSIGNIS.
5, 5 a-g ♂ BION BREVIS.
6, 6 a-g ♂ ELAVER TIGRINA.
7 ♀ " "
8, 8 a-c ♀ ARIADNE COMATA.
9, 9 a-c ♀ " PILIFERA.
10, 10 a-d ♀ ELAVER DEPUNCTA.
11, 11 a-e ♀ " SERICEA.

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# PLATE XXXI.

Fig. 1. *Prusias nugalis*, ♀ : 1 *a*, genital aperture.

2. *Epeira merens*, ♀ : 2 *a*, profile ; 2 *b*, eyes and falces from in front ; 2 *c*, fore part of caput and eyes from above and behind ; 2 *d*, maxillæ, labium, and sternum ; 2 *e*, genital process from beneath ; 2 *f*, ditto, from in front and above ; 2 *g*, ditto, in profile.

3. *Cyclosa furcata*, ♀ : 3 *a*, profile ; 3 *b*, eyes and falces from in front ; 3 *c*, caput and eyes from above and behind ; 3 *d*, genital process in front ; 3 *e*, ditto, in profile.

4. *Elaver placida*, ♀ : 4 *a*, profile ; 4 *b*, fore part of caput from above and behind ; 4 *c*, eyes and falces from in front ; 4 *d*, genital aperture.

5. *Bassania æmula*, ♀ : 5 *a*, profile ; 5 *b*, eyes and falces from in front ; 5 *c*, 5 *d*, eyes from above and behind ; 5 *e*, maxillæ, labium, and sternum ; 5 *f*, genital aperture.

6. *Amamra turrigera*, ♀ : 6 *a*, abdomen from behind ; 6 *b*, profile ; 6 *c*, eyes and falces from in front ; 6 *d*, eyes from above and behind.

7. *Metagonia caudata*, ♂ : 7 *a*, profile ; 7 *b*, eyes and falces from in front ; 7 *c*, caput and eyes from above and behind ; 7 *d*, 7 *e*, palpal organs in two positions.

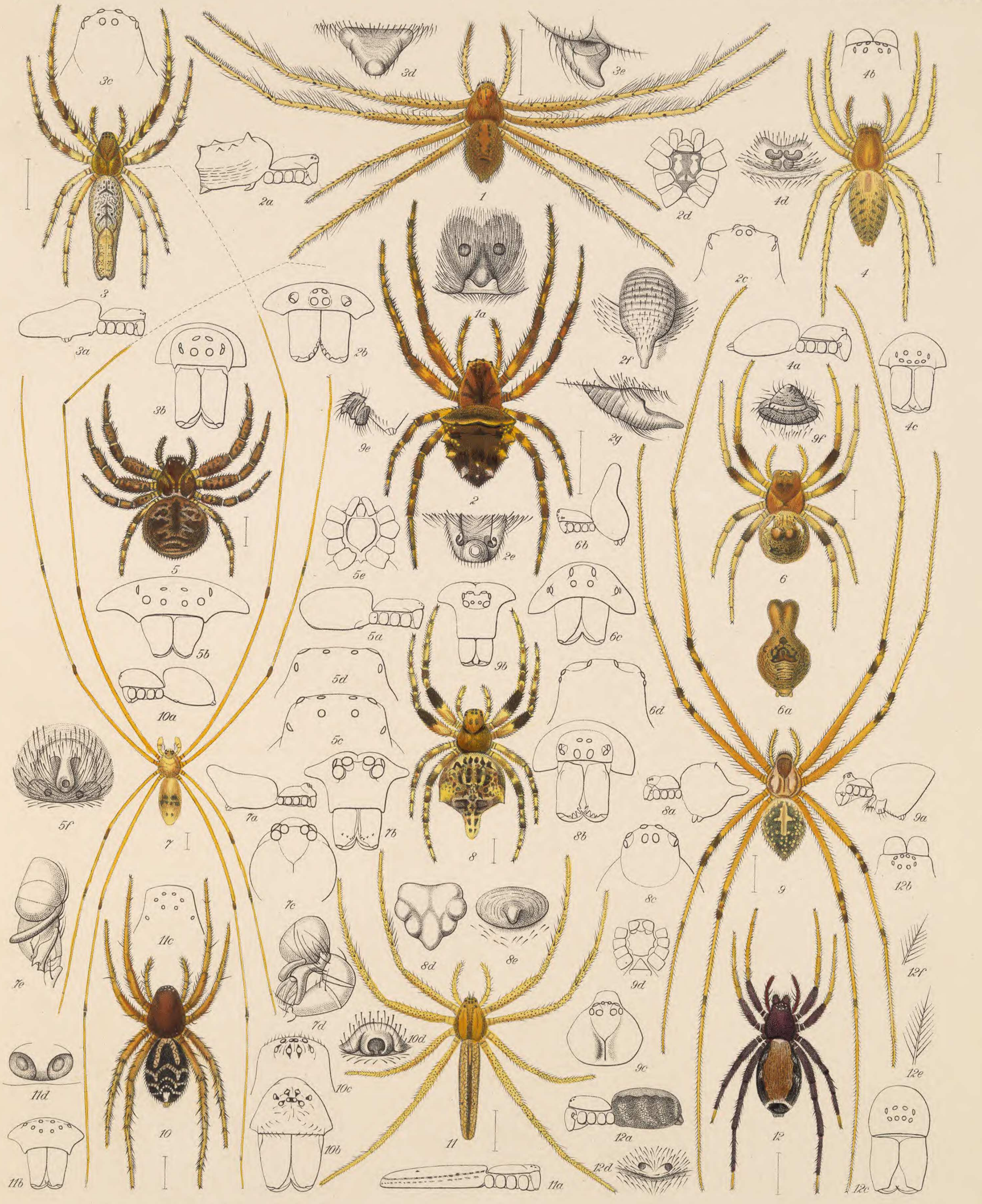
8. *Cyclosa clara*, ♀ : 8 *a*, profile ; 8 *b*, eyes and falces from in front ; 8 *c*, caput and eyes from above and behind ; 8 *d*, sternum ; 8 *e*, genital process.

9. *Coryssocnemis simoni*, ♀ : 9 *a*, profile ; 9 *b*, eyes and falces from in front ; 9 *c*, cephalothorax and eyes from from above and behind ; 9 *d*, maxillæ, labium, and sternum ; 9 *e*, genital process in profile ; 9 *f*, ditto, from in front.

10. *Storena lauta*, ♀ : 10 *a*, profile ; 10 *b*, eyes and falces from in front ; 10 *c*, eyes from above and behind ; 10 *d*, genital aperture.

11. *Tibellus affinis*, ♀ : 11 *a*, profile ; 11 *b*, eyes and falces from in front ; 11 *c*, eyes from above and behind ; 11 *d*, genital aperture.

12. *Castianeira* (*Pedo*) *plumosa*, ♀ : 12 *a*, profile ; 12 *b*, eyes from above and behind ; 12 *c*, eyes and falces from in front ; 12 *d*, genital aperture ; 12 *e*, 12 *f*, plumose hairs on abdomen and legs.




1,1a ♀ PRUSIAS NUGALIS.
2,2a-g ♀ EPEIRA MERENS.
3,3a-e ♀ CYCLOSA FURCATA.
4,4a-d ♀ ELAVER PLACIDA.
5,5a-f ♀ BASSANIA ÆMULA.
6,6a-d ♀ AMAMRA TURRIGERA.
7,7a-e ♂ METAGONIA CAUDATA.
8,8a-e ♀ CYCLOSA CLARA.
9, 9a-f ♀ CORYSSOCNEMIS SIMONI.
10,10a-d ♀ STORENA LAUTA.
11,11a-d ♀ TIBELLUS AFFINIS.
12,12a-f ♀ PEDO PLUMOSUS.

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## PLATE XXXII.

Fig. 1. *Filistata capillosa*, ♀: 1 *a*, profile; 1 *b*, eyes from above and behind; 1 *c*, underside of abdomen; 1 *d*, leg of first pair, showing dense brush of hairs.

2. *Apollophanes distinctus*, ♀.

3. *Philodromus decolor*, ♀: 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, genital aperture.

4. *Modisimus inornatus*, Cambr., ♂: 4 *a*, profile; 4 *b*, eyes and falces from in front; 4 *c*, 4 *d*, and 4 *e*, palpus in different positions.

5. *Cesonia fugax*, ♀: 5 *a*, profile; 5 *b*, eyes and falces from in front; 5 *c*, genital aperture.

6. *Memnon peragrans*, ♀: 6 *a*, profile; 6 *b*, eyes from above and behind; 6 *c*, eyes and falces from in front; 6 *d*, underside; 6 *e*, genital aperture.

7. *Menalippe punctigera*, ♀: 7 *a*, profile; 7 *b*, eyes from above and behind; 7 *c*, eyes and falces from in front; 7 *d*, maxillæ, labium, and sternum; 7 *e*, genital aperture.

8. *Castianeira debilis*, ♀: 8 *a*, profile; 8 *b*, eyes from above and behind; 8 *c*, genital aperture.

9. *Castianeira luctuosus*, ♀: 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c*, genital aperture.

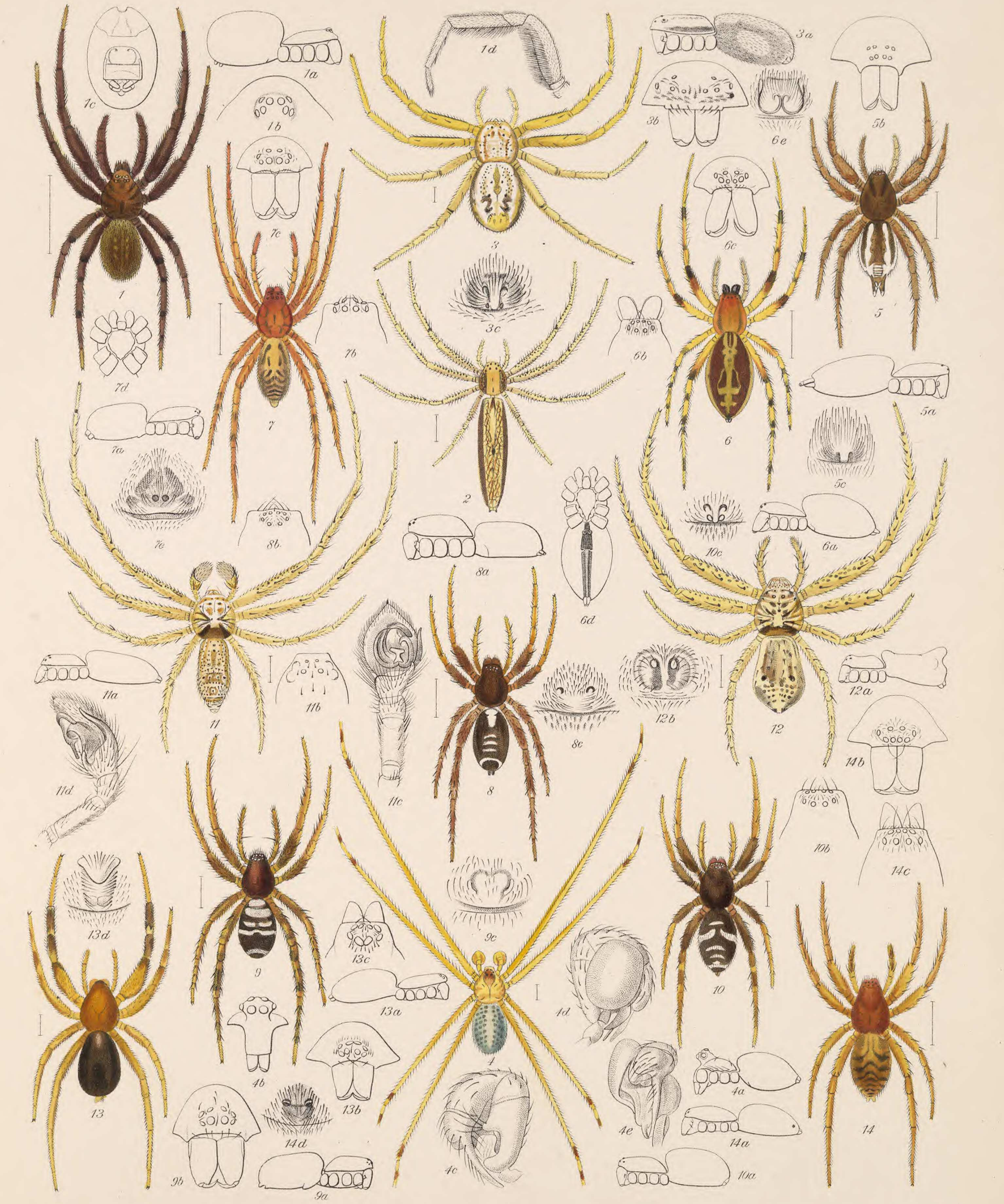
10. *Castianeira lugens*, ♀: 10 *a*, profile; 10 *b*, eyes from above and behind; 10 *c*, genital aperture.

11. *Tmarus jocosus*, ♂: 11 *a*, profile; 11 *b*, eyes from above and behind; 11 *c* and 11 *d*, palpus in two positions.

12. *Tmarus jocosus*, ♀: 12 *a*, profile; 12 *b*, genital aperture.

13. *Echemus pedestris*, ♀: 13 *a*, profile; 13 *b*, eyes and falces from in front; 13 *c*, eyes from above and behind; 13 *d*, genital aperture.

14. *Clubiona mordica*, ♀: 14 *a*, profile; 14 *b*, eyes and falces from in front; 14 *c*, eyes from above and behind; 14 *d*, genital aperture.




1, 1a–d ♀ FILISTATA CAPILLOSA.
2 ♀ APOLLOPHANES DISTINCTUS.
3, 3a–c ♀ PHILODROMUS DECOLOR.
4, 4a–e ♂ MODISIMUS INORNATUS.
5, 5a–c ♀ CESONIA FUGAX.
6, 6a–e ♀ MEMNON PERAGRANS.
7, 7a–e ♀ MENALIPPE PUNCTIGERA.
8, 8a–c ♀ CASTIANEIRA FLEBILIS.
9, 9a–c ♀ " LUCTUOSUS.
10, 10a–c ♀ CASTIANEIRA LUGENS.
11, 11a–d ♂ TMARUS JOCOSUS.
12, 12a, b ♀ " "
13, 13a–d ♀ ECHEMUS PEDESTRIS.
14, 14a–d ♀ CLUBIONA MORDICA.

A.T. Hollick del.  Edwin Wilson. Cambridge.

Black 3/Color White Magenta Red Yellow Green Cyan Blue
Kodak LICENSED PRODUCT © The Tiffen Company, 2000 KODAK Color Control Patches
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

# PLATE XXXIII.

Fig. 1. *Bonna fidelis*, ♀: 1 *a*, profile; 1 *b*, eyes and falces from in front; 1 *c*, eyes from above and behind; 1 *d*, maxillæ, labium, and sternum; 1 *e*, genital aperture.

2. *Prosthesima mœsta*, ♂: 2 *a*, profile; 2 *b* and 2 *c*, palpus in two positions; 2 *d*, eyes and falces from in front; 2 *e*, eyes from above and behind; 2 *f*, genital aperture, ♀.

3. *Corinnomma pilosum*, ♂: 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, eyes from above and behind; 3 *d* and 3 *e*, palpus in two positions.

4. *Corinnomma pilosum*, ♀: 4 *a*, maxillæ, labium, and sternum; 4 *b*, genital aperture.

5. *Clubiona excisa*, ♂: 5 *a*, profile; 5 *b*, eyes from behind; 5 *c*, eyes and falces from in front; 5 *d* and 5 *e*, palpus in two positions.

6. *Pirata felix*, ♀: 6 *a*, profile; 6 *b*, eyes from behind; 6 *c*, eyes and falces from in front; 6 *d*, genital aperture.

7. *Bedriacum prædator*, ♂: 7 *a*, profile; 7 *b*, eyes from behind; 7 *c*, eyes and falces from in front; 7 *d* and 7 *e*, palpus in two positions; 7 *f*, maxillæ, labium, and sternum.

8. *Epeira scutigera*, ♀: 8 *a*, profile; 8 *b*, eyes and falces from in front; 8 *c*, eyes from behind; 8 *d*, genital aperture; 8 *e*, ditto in profile.

9. *Cragus inornatus*, ♂: 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c*, eyes from behind; 9 *d*, 9 *e*, and 9 *f*, palpus in three positions.

10. *Castianeira* (*Pedo*) *plorans*, ♂: 10 *a*, profile; 10 *b*, eyes and falces from in front; 10 *c*, eyes from behind; 10 *d* and 10 *e*, palpus in two positions.

11. *Castianeira* (*Pedo*) *plorans*, ♀: 11 *a*, genital aperture.

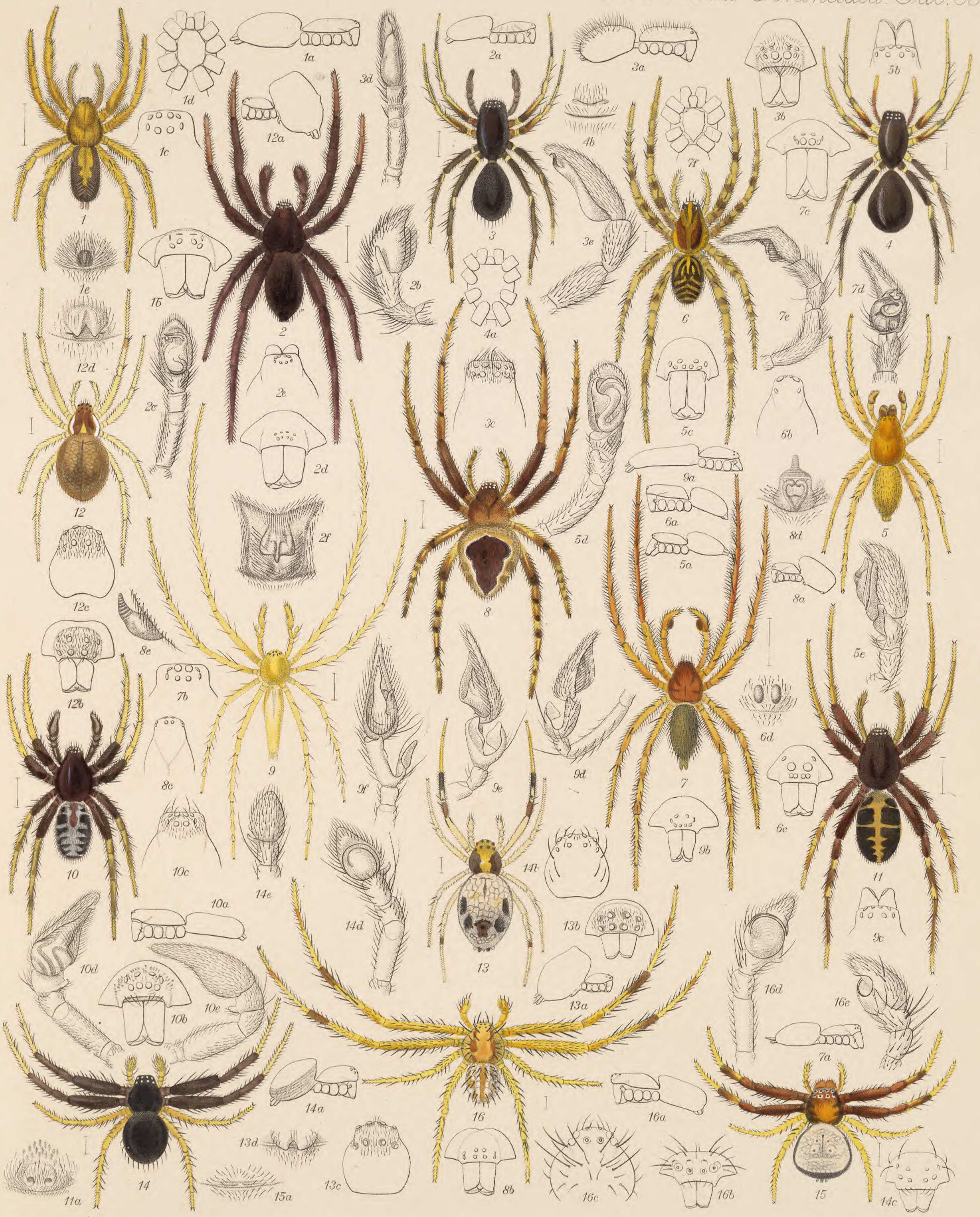
12. *Uloborus spernax*, ♀: 12 *a*, profile; 12 *b*, eyes and falces from in front; 12 *c*, eyes from behind; 12 *d*, genital aperture.

13. *Uloborus cinereus*, ♀: 13 *a*, profile; 13 *b*, eyes and falces from in front; 13 *c*, eyes from behind; 13 *d*, genital aperture.

14. *Synæma polita*, ♂: 14 *a*, profile; 14 *b*, eyes from behind; 14 *c*, eyes and falces from in front; 14 *d* and 14 *e*, palpus in two positions.

15. *Synæma polita*, ♀: 15 *a*, genital aperture.

16. *Diæa spinigera*, ♂: 16 *a*, profile; 16 *b*, eyes and falces from in front; 16 *c*, eyes from behind; 16 *d* and 16 *e*, palpus in two positions.




1, 1a–e ♀ BONNA FIDELIS.
2, 2a–e ♂ PROSTHESIMA MŒSTA.
2f ♀ " "
3, 3a–e ♂ CORINNOMMA PILOSUM.
4, 4a, b ♀ " "
5, 5a–e ♂ CLUBIONA EXCISA.
6, 6a–d ♀ PIRATA FELIX.
7, 7a–f ♂ BEDRIACUM PRÆDATOR.
8, 8a–e ♀ EPEIRA SCUTIGERA.
9, 9a–f ♂ CRAGUS INORNATUS.
10, 10a–e ♂ CASTIANEIRA (PEDO) PLORANS.
11, 11a ♀ CASTIANEIRA (PEDO) PLORANS.
12, 12a–d ♀ ULOBORUS SPERNAX.
13, 13a–d ♀ " CINEREUS.
14, 14a–e ♂ SYNÆMA POLITA.
15, 15a ♀ " "
16, 16a–e ♂ DIÆA SPINIGERA.

A. T. Hollick del. E. Wilson Cambridge.

## PLATE XXXIV.

Fig. 1. *Corinnomma dubium*, ♀: 1 *a*, profile; 1 *b*, eyes and falces from in front; 1 *c*, genital aperture.

2. *Mazax spinosus*, ♀: 2 *a*, profile; 2 *b*, eyes from above and behind; 2 *c*, eyes and falces from in front; 2 *d*, maxillæ, labium, and sternum; 2 *e*, genital aperture.

3. *Eutichurus putus*, ♀: 3 *a*, profile; 3 *b*, eyes from above and behind; 3 *c*, eyes and falces from in front; 3 *d*, genital aperture.

4. *Castianeira* (*Pedo*) *lachrymosa*, ♀: 4 *a*, profile; 4 *b*, eyes and falces from in front; 4 *c*, eyes from above and behind; 4 *d*, genital aperture.

5. *Thomisus odiosus*, ♂: 5 *a*, profile; 5 *b*, eyes and falces from in front; 5 *c*, palpus; 5 *d*, ditto in another position.

6. *Theridion hirsutum*, ♂: 6 *a*, profile; 6 *b*, eyes from in front; 6 *c* and 6 *d*, palpus in two positions.

7. *Theridion rotundum*, ♀: 7 *a*, profile; 7 *b*, eyes and falces from in front; 7 *c*, eyes from above and behind; 7 *d*, genital aperture.

8. *Theridion vivum*, ♀: 8 *a*, profile; 8 *b*, eyes and falces from in front; 8 *c*, genital aperture.

9. *Theridion albulum*, ♀: 9 *a*, profile; 9 *b*, underside of abdomen; 9 *c*, eyes and falces from in front; 9 *d*, eyes from above and behind; 9 *e*, genital aperture.

10. **Theridion* (*Phyllonethis*) *trepidum*, ♂: 10 *a*, profile; 10 *b*, eyes and falces from in front; 10 *c* and 10 *d*, palpus in two positions.

11. *Theridion niveum*, ♀: 11 *a*, profile; 11 *b*, eyes and falces from in front; 11 *c*, eyes from above and behind; 11 *d*, genital aperture; 11 *e*, ditto in profile.

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* The female only of this spider is described (p. 256). The male here figured shows by the form of the falces that it is of the genus *Phyllonethis*, Thor.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1, 1a–c ♀ CORINNOMMA DUBIUM.
2, 2a–e ♀ MAZAX SPINOSUS.
3, 3a–d ♀ EUTICHURUS PUTUS.
4, 4a–d ♀ CASTIANEIRA (PEDO) LACHRYMOSA.
5, 5a–d ♂ THOMISUS ODIOSUS.
6, 6a–d ♂ THERIDION HIRSUTUM.
7, 7a–d ♀ " ROTUNDUM.
8, 8a–c ♀ THERIDION VIVUM.
9, 9a–e ♀ " ALBULUM.
10, 10a–d ♂ " TREPIDUM.
11, 11a–e ♀ " NIVEUM.

A.T. Hollick del. Edwin Wilson, Cambridge.

Plate Centr. elm. Arachnida Araneidea Tab. 34

## PLATE XXXV.

Fig. 1. *Mallos niveus*, ♂: 1 *a*, profile; 1 *b*, spinners; 1 *c*, eyes and falces from in front; 1 *d*, eyes from above and behind; 1 *e*, part of leg of fourth pair showing calamistrum; 1 *f*, maxillæ, labium, and sternum.

2. *Erissus pustulatus*, ♀: 2 *a*, profile; 2 *b*, eyes and falces from in front; 2 *c*, eyes from above and behind; 2 *d*, genital aperture.

3. *Theridion transversum*, ♂: 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, eyes from above and behind; 3 *d* and 3 *e*, palpus in two positions.

4. *Theridion transversum*, ♀: 4 *a*, profile; 4 *b*, genital aperture.

5. *Theridion hispidum*, ♂: 5 *a*, profile; 5 *b*, eyes and falces from in front; 5 *c*, eyes from above and behind; 5 *d* and 5 *e*, palpus in two positions.

6. *Theridion morulum*, ♀: 6 *a*, profile; 6 *b*, eyes and falces from in front; 6 *c*, eyes from above and behind; 6 *d*, genital aperture; 6 *e*, ditto in profile.

7. *Teutana zonata*, ♂: 7, 7 *a*, and 7 *b*, palpus in three positions.

8. *Teutana zonata*, ♀: 8 *a*, profile; 8 *b*, eyes and falces from in front; 8 *c*, genital aperture.

9. *Linyphia confinis*, ♀: 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c*, genital aperture.

10. *Linyphia læta*, ♂: 10 *a*, profile; 10 *b*, eyes and falces from in front; 10 *c* and 10 *d*, palpus in two positions.

11. *Linyphia læta*, ♀: 11 *a*, profile; 11 *b*, hinder view of abdomen; 11 *c*, eyes and falces from in front; 11 *d*, genital aperture.

1,1a-f ♂ MALLOS NIVEUS.
2,2a-d ♀ ERISSUS PUSTULATUS.
3,3a-e ♂ THERIDION TRANSVERSUM.
4,4a,b ♀ ,, ,,

5,5a-e ♂ THERIDION HISPIDUM.
6,6a-e ♀ ,, MORULUM.
7,7a,b ♂ TEUTANA ZONATA.

8,8a-c ♀ TEUTANA ZONATA.
9,9a-c ♀ LINYPHIA CONFINIS.
10,10a-d ♂ ,, LÆTA.
11,11a-d ♀ ,, ,,

A.T.Hollick. del.

Edwin Wilson. Cambridge.

## PLATE XXXVI.

Fig. 1. *Amamra clivosa*, ♀: 1 *a*, profile; 1 *b*, genital aperture and process.
2. *Amamra clivosa*, ♂: 2 *a*, profile; 2 *b*, eyes and falces from in front; 2 *c*, 2 *d*, 2 *e*, palpus in three positions; 2 *f*, leg of second pair.
3. *Epeira semifoliata*, ♀: 3 *a*, profile; 3 *b*, eyes and falces from in front; 3 *c*, genital aperture and process.
4. *Scoloderus gibber*, ♀: 4 *a*, profile; 4 *b*, eyes and falces from in front; 4 *c*, genital process in profile; 4 *d*, ditto from in front.
5. *Mimetus trituberculatus*, ♀: 5 *a*, eyes and falces from in front; 5 *b*, genital aperture and process.
6. *Mimetus rapax*, ♂: 6 *a*, eyes and falces from in front; 6 *b*, 6 *c*, 6 *d*, palpus in three positions.
7. *Mimetus rapax*, ♀: 7 *a*, genital aperture.
8. *Mimetus crudelis*, ♂: 8 *a*, eyes and falces from in front; 8 *b*, 8 *c*, palpus in two positions.
9. *Mimetus hirsutus*, ♀: 9 *a*, profile.
10. *Cyclosa tuberculifera*, ♂: 10 *a*, profile; 10 *b*, eyes from in front; 10 *c*, eyes and caput from above and behind; 10 *d*, 10 *e*, palpus in two positions.
11. *Tetragnatha digitata*, ♂: 11 *a*, profile; 11 *b*, falces from in front; 11 *d*, 11 *e*, palpus in two positions; 11 *f*, eyes and caput from above and behind.
12. *Tetragnatha digitata*, ♀: 12 *a*, profile.
13. *Paphlagon beatus*, ♂: 13 *a*, profile; 13 *b*, eyes and falces from in front; 13 *c*, 13 *d*, 13 *e*, palpus in three positions.
14. *Acrosoma bimucronatum*, ♀: 14 *a*, profile; 14 *b*, eyes and caput from above and behind.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1,1a,b ♀ AMAMRA CLIVOSA.
2,2a-f ♂ " "
3,3a-c ♀ EPEIRA SEMIFOLIATA.
4,4a-d ♀ SCOLODERUS GIBBER.
5,5a,b ♀ MIMETUS TRITUBERCULATUS.
6,6a-d ♂ MIMETUS RAPAX "
7,7a ♀ " "
8,8a-c ♂ " CRUDELIS
9,9a ♀ " HIRSUTUS.
10,10a-e ♂ CYCLOSA TUBERCULIFERA.
11,11a-f ♂ TETRAGNATHA DIGITATA.
12,12a ♀ " "
13,13a-e ♂ PAPHLAGON BEATUS
14,14a,b ♀ ACROSOMA BIMUCRONATUM

A.T. Holbrook del. Edwin Wilson, Cambridge.

Boston Bentr. Lith.

Arachnida Araneidea Tab. 36.

## PLATE XXXVII.

Fig. 1. *Rubrius mordax*, ♀ : 1 *a*, profile ; 1 *b*, eyes and falces from in front ; 1 *c*, eyes from above and behind ; 1 *d*, maxillæ, labium, and sternum ; 1 *e*, genital aperture.

2. *Argiope blanda*, ♂ : 2 *a*, profile ; 2 *b*, eyes and falces from in front ; 2 *c*, eyes from above and behind ; 2 *d* and 2 *e*, palpus in two positions ; 2 *f*, underside.

3. *Argyrodes maculosa*, ♀ : 3 *a*, profile ; 3 *b*, eyes from above and behind.

4. *Epeira smithi*, ♀ : 4 *a*, profile ; 4 *b*, eyes and falces from in front ; 4 *c*, genital process in front ; 4 *d*, ditto, in profile.

5. *Epeira nava*, ♀ : 5 *a*, profile ; 5 *b*, eyes and falces from in front ; 5 *c*, genital aperture and process in front ; 5 *d*, ditto, in profile.

6. *Epeira honesta*, ♀ : 6 *a*, profile ; 6 *b*, eyes and falces from in front ; 6 *c*, genital aperture and process ; 6 *d*, ditto, in profile.

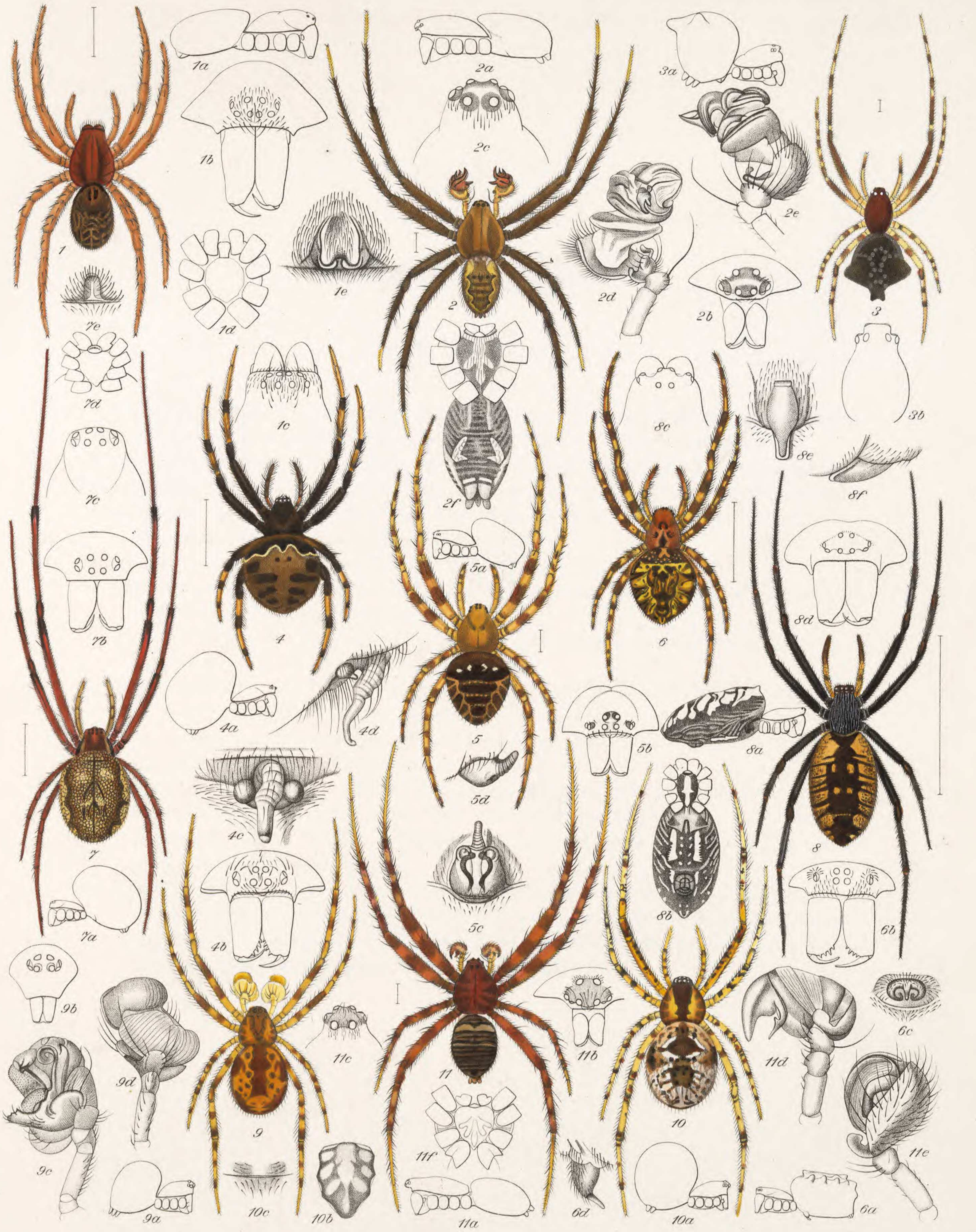
7. *Metabus gravidus*, ♀ : 7 *a*, profile ; 7 *b*, eyes and falces from in front ; 7 *c*, eyes from above and behind ; 7 *d*, maxillæ, labium, and sternum ; 7 *e*, genital aperture.

8. *Argiope godmani*, ♀ : 8 *a*, profile ; 8 *b*, underside ; 8 *c*, eyes from above and behind ; 8 *d*, eyes and falces from in front ; 8 *e*, genital process in front ; 8 *f*, ditto, in profile.

9. *Dipœna proba*, ♂ : 9 *a*, profile ; 9 *b*, eyes and falces from in front ; 9 *c* and 9 *d*, palpus in two positions.

10. *Dipœna proba*, ♀ : 10 *a*, profile ; 10 *b*, sternum ; 10 *c*, genital aperture.

11. *Gea prædicta*, ♂ : 11 *a*, profile ; 11 *b*, eyes and falces from in front ; 11 *c*, eyes from above and behind ; 11 *d* and 11 *e*, palpus in two positions ; 11 *f*, maxillæ, labium, and sternum.




1, 1a-e ♀ RUBRIUS MORDAX.
2, 2a-f ♂ ARGIOPE BLANDA.
3, 3a, b ♀ ARGYRODES MACULOSA.
4, 4a-d ♀ EPEIRA SMITHI.
5, 5a-d ♀ EPEIRA NAVA.
6, 6a-d ♀ " HONESTA.
7, 7a-e ♀ METABUS GRAVIDUS.
8, 8a-f ♀ ARGIOPE GODMANI.
9, 9a-d ♂ DIPŒNA PROBA.
10, 10a-c ♀ " "
11, 11a-f ♂ GEA PRÆDICTA.

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## PLATE XXXVIII.

Fig. 1. *Argyrodes linguata*, ♂: 1 *a*, profile of cephalothorax; 1 *b*, eyes from above and behind; 1 *c*, eyes, clypeus, and falces from in front; 1 *d* and 1 *e*, palpus in two positions.

2. *Argyrodes subdola*, ♀: 2 *a*, profile; 2 *b*, eyes from above and behind; 2 *c*, genital aperture.

3. *Argyrodes furcata*, ♀: 3 *a*, profile; 3 *b*, eyes from above and behind; 3 *c*, genital aperture.

4. *Argyrodes aurea*, ♂: 4 *a*, profile; 4 *b*, eyes from above and behind; 4 *c*, eyes and falces from in front; 4 *d* and 4 *e*, palpus in two positions.

5. *Ariamnes procera*, ♀: 5 *a*, profile; 5 *b*, eyes and falces from in front.

6. *Lithyphantes clara*, ♀: 6 *a*, profile; 6 *b*, eyes and falces from in front; 6 *c*, eyes from above and behind; 6 *d*, genital aperture.

7. *Trochosa insignis*, ♂: 7 *a*, profile; 7 *b*, eyes and falces from in front; 7 *c*, eyes from above and behind; 7 *d* and 7 *e*, palpus in two positions.

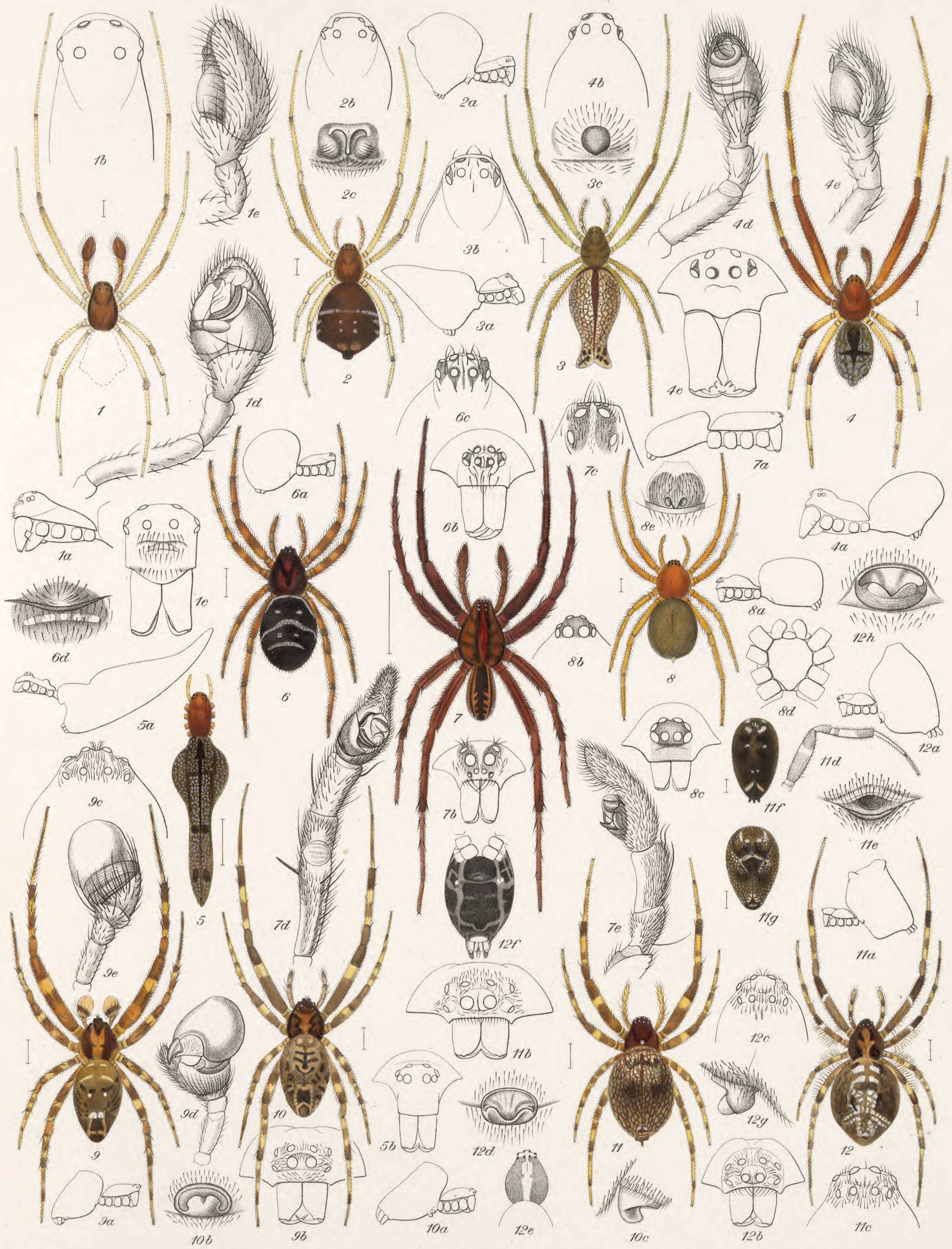
8. *Mettus reclivis*, ♀: 8 *a*, profile; 8 *b*, eyes from above and behind; 8 *c*, eyes and falces from in front; 8 *d*, maxillæ, labium, and sternum; 8 *e*, genital aperture.

9. *Uloborus signatus*, ♂: 9 *a*, profile; 9 *b*, eyes and falces from in front; 9 *c*, eyes from above and behind; 9 *d* and 9 *e*, palpus in two positions.

10. *Uloborus signatus*, ♀: 10 *a*, profile; 10 *b*, genital aperture; 10 *c*, ditto in profile.

11. *Uloborus variegatus*, ♀: 11 *a*, profile; 11 *b*, eyes and falces from in front; 11 *c*, eyes from above and behind; 11 *d*, leg of first pair; 11 *e*, genital aperture; 11 *f* and 11 *g*, underside of abdomen in two examples.

12. *Uloborus vicinus*, ♀: 12 *a*, profile; 12 *b*, eyes and falces from in front; 12 *c*, eyes from above and behind; 12 *d*, genital aperture; 12 *e*, cephalothorax, showing form of characteristic stripe; 12 *f*, underside of abdomen; 12 *g*, genital process in profile; 12 *h*, genital process. (The last four figures are from another example.)



| | | | |
|---|---|---|---|
| 1, 1a-e ♂ | ARGYRODES | LINGUATA. | |
| 2, 2a-c ♀ | " | SUBDOLA. | |
| 3, 3a-c ♀ | " | FURCATA. | |
| 4, 4a-e ♂ | " | AUREA. | |
| 5, 5a, b ♀ | ARIAMNES | PROCERA. | |
| 6, 6a-d ♀ | LITHYPHANTES | CLARA. | |
| 7, 7a-e ♂ | TROCHOSA | INSIGNIS. | |
| 8, 8a-e ♀ | METTUS | RECLIVIS. | |
| 9, 9a-e ♂ | ULOBORUS | SIGNATUS. | |
| 10, 10a-c ♀ | " | " | |
| 11, 11a-g ♀ | " | VARIEGATUS. | |
| 12, 12a-h ♀ | " | VICINUS. | |

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# PLATE XXXIX.

Fig. 1. *Euryopis probabilis*, ♀ : 1 *a*, profile ; 1 *b*, eyes from above and behind ; 1 *c*, eyes and falces from in front ; 1 *d*, genital aperture.

2. *Euryopis proxima*, ♀ : 2 *a*, profile ; 2 *b*, eyes from above and behind ; 2 *c*, eyes and falces from in front ; 2 *d*, genital aperture.

3. *Physocyclus rotundus*, ♀ : 3 *a*, profile ; 3 *b*, eyes and falces from in front ; 3 *c*, underside of abdomen.

4. *Bathyphantes sana*, ♀ : 4 *a*, profile ; 4 *b*, eyes from above and behind ; 4 *c*, eyes and falces from in front ; 4 *d*, underside of abdomen ; 4 *e*, genital aperture.

5. *Mermessus dentiger*, ♂ : 5 *a*, profile ; 5 *b*, eyes and falces from in front ; 5 *c*, 5 *d*, palpus in two positions.

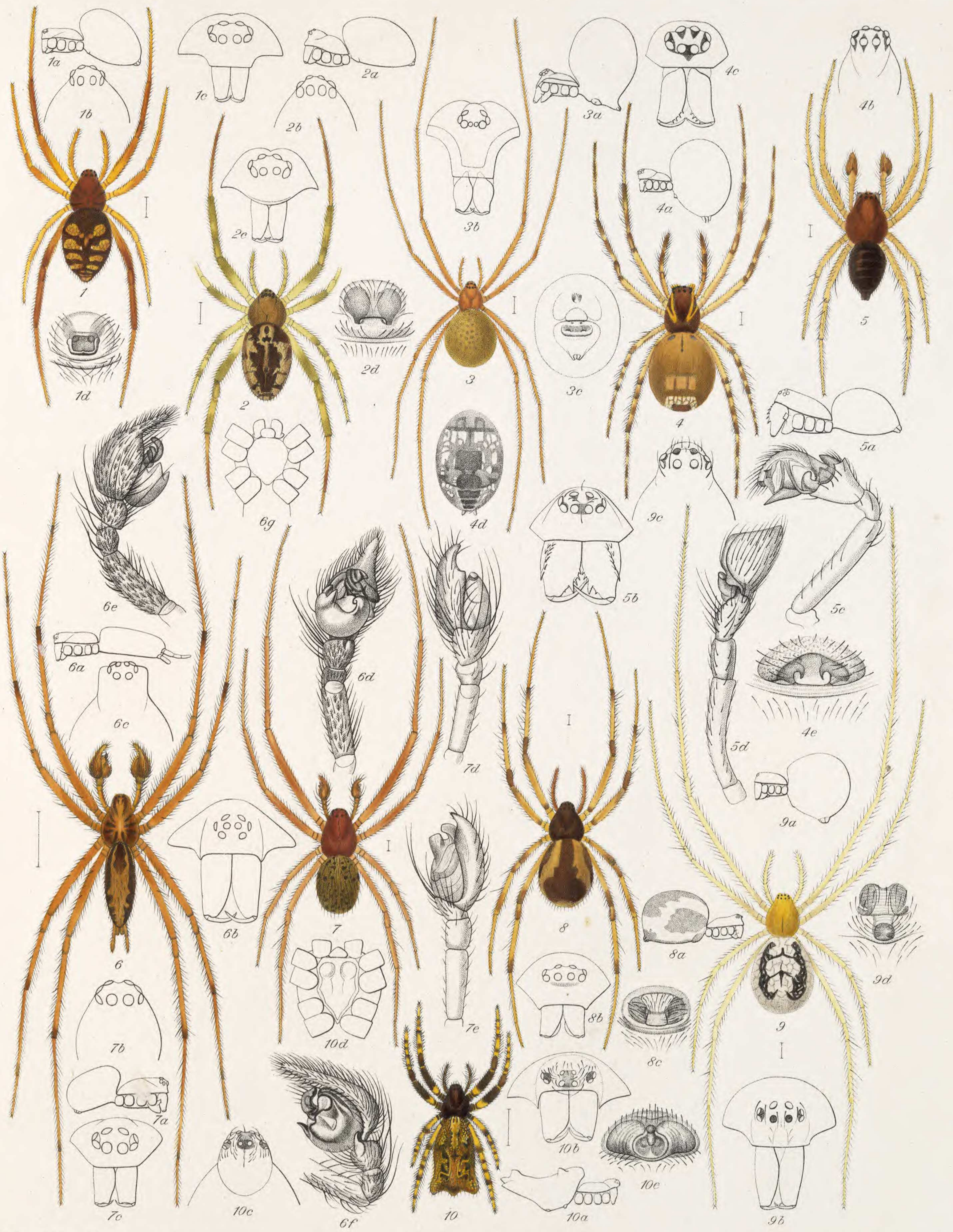
6. *Melpomene elegans*, ♂ : 6 *a*, profile ; 6 *b*, eyes and falces from in front ; 6 *c*, eyes from behind ; 6 *d*, 6 *e*, 6 *f*, palpus in different positions ; 6 *g*, underside of cephalothorax, showing maxillæ, labium, and sternum.

7. *Achæa mendax*, ♂ : 7 *a*, profile ; 7 *b*, eyes from above and behind ; 7 *c*, eyes and falces from in front ; 7 *d*, 7 *e*, palpus in two positions.

8. *Leptyphantes* (?) *dubia*, ♀ : 8 *a*, profile ; 8 *b*, eyes and falces from in front ; 8 *c*, genital aperture.

9. *Phyllonethis trepida*, ♀ : 9 *a*, profile ; 9 *b*, eyes and falces from in front ; 9 *c*, eyes from above and behind ; 9 *d*, genital aperture.

10. *Turckheimia scelesta*, ♀ : 10 *a*, profile ; 10 *b*, eyes and falces from in front ; 10 *c*, eyes from above and behind ; 10 *d*, underside of cephalothorax, showing maxillæ, labium, and sternum ; 10 *e*, genital aperture.




1,1a-d♀ EURYOPIS PROBABILIS.
2,2a-d♀ " PROXIMA.
3,3a-c♀ PHYSOCYCLUS ROTUNDUS.
4,4a-e♀ BATHYPHANTES SANA.
5,5a-d♂ MERMESSUS DENTIGER.
6,6a-g♂ MELPOMENE ELEGANS.
7,7a-e♂ ACHÆA MENDAX.
8,8a-c♀ LEPTYPHANTES (?) DUBIA.
9,9a-d♀ PHYLLONETHIS TREPIDA.
10,10a-e♀ TURCKHEIMIA SCELESTA.

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